

Chile Self-Supply Renewable Energy (SSRE)

Final Evaluation and Learning Exercise (ELE) Report & Management Response

October 2021

Overview

- **Management Response:** response to the recommendations made by the evaluation team in this Evaluation and Learning Exercise (ELE) report. Jointly written by the NAMA Support Project (NSP) and the Technical Support Unit (TSU) of the NAMA Facility.
- **Evaluation and Learning Exercise Report:** external and independent evaluation conducted by the consortium AMBERO and Oxford Policy Management.

ELE Chile Self-Supply Renewable Energy Management Response

Draft Version 11 June 2021

1 Background

In 2020, the Technical Component (TC) of the NAMA Support Project (NSP) Chile Self-Supply Renewable Energy implemented by the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) was subject to an independent end-of project Evaluation and Learning Exercise (ELE) conducted by an evaluation team led by AMBERO Consulting. The final ELE report is published on the NAMA Facility's website: nama-facility.org/publications.

It needs to be noted that the ELE was supposed to cover both the Technical and Financial Components that were due to be completed by February 2019. However due to a number of delays, only the NSP's TC came to an end in 12/2020. The Financial Component (FC) implemented by KfW will run until 12/2024, as of today.

The Technical Support Unit (TSU) is publishing this management response to the recommendations made by the evaluation team in their ELE report.

2 Response to Recommendations

Recommendations	Management Response		
Lesson 1: Maintain flexibility in the project focus to respond to context changes			
Recommendation 1	Activities	Responsible Entity	Timeline
Keep the NSP objectives central by having KfW playing the role of “guardian” of the NSP ToC and the alignment with NAMA Facility ToC, without losing the flexibility and balance to be able to include goals useful to the local implementing partners too.	<u>Ongoing activities:</u> The NAMA Facility offers a high degree of flexibility to the NSPs through its Amendment Policy. The Chilean NSP’s TC is a case in point, with an amendment request being granted to meet the NSP’s need for policy and regulatory framework support (which was not part of the initial project concept). The NSP’s ToC is monitored on a constant basis and NSPs are required to analyse and report on the relevance of their ToC every year.	TSU, NSP	Ongoing
	<u>Additional activities:</u> Given the dynamically changing political and financial landscape, it will be important that KfW as a Delivery Organisation (DO) of the NSP-FC keeps close exchanges with all project	National stakeholders, incl. implementing partners and NSP-FC	During FC implementation

	stakeholders to ensure that right financial products are developed and offered to the right target groups at a suitable time. It is also crucial that KfW informs the NAMA Facility / TSU about the need for an amendment (if any) in a timely manner.		
Recommendation 2	Activities	Responsible Entity	Timeline
Create a high-level political coordination table (see recommendation n. 5) to keep the Financial Component aligned and coordinated, thus avoiding overlaps with other existing mechanisms	<u>Ongoing activities:</u> All NSPs are required to develop a Steering Structure involving national political and implementing partners to ensure proper coordination of activities, national ownership and sustainability of the intervention through anchoring in national / sub-national governance bodies.	TSU, NSP TSU, NSP	Ongoing
	<u>Additional activities:</u> Despite the delays with launching the FC, a meeting between the Ministry of Energy and CORFO, KfW and Self-supply Renewable Energy suppliers, including Energy Service Companies (ESCOs) was held in November 2019 to get a closer view of the market evolution during the time the FC was being delayed. In 2020, a Directive Committee composed of representatives from the MoE, CORFO, KfW and GIZ was created with the objective of launching the FC and ensuring successful implementation of the NSP. Upholding coordination between the actors involved in the implementation of the FC will therefore be crucial for the success of the FC and the NSP overall.	National Implementing Partner and NSP-FC	At the end of TC implementation ; during FC implementation
Recommendation 3	Activities	Responsible Entity	Timeline
Institute an internal NSP learning mechanism to monitor the outcomes and	<u>Ongoing activities:</u> In 2019 the NAMA Facility's knowledge creation strategy	TSU	Ongoing

learning from the implementation of the Financial Component and subsequently adapt it.	<p>was approved by the NAMA Facility Board. It was accompanied by a 3-year work plan. One of the Work Packages requires all NSPs entering into DPP to formulate their own knowledge and learning goals. The NAMA Facility aims to encourage and support NSPs to define structured approaches to knowledge creation and sharing. The FC of the NSP will also undergo intermediate and final ELEs which will streamline and support the processes of knowledge creation and learning.</p> <p><u>Additional activities:</u> All NSP's are encouraged to share lessons learnt as part of their reporting duties (Annual and Semi-Annual Reports). The TSU also encourages the sharing of knowledge / lessons learnt through the regular exchanges between the NSPs (virtual format and physical events).</p>	NSP, TSU	<p>Continuously monitored by NSPs starting from the 4th Call. Reported to TSU in Semi-Annual and Annual Report; shared during the designated exchanges between the NSPs</p>
--	--	----------	--

Lesson 2: Keep technical assistance and capacity building for the financial sector as a high priority

Recommendation 4	Activities	Responsible Entity	Timeline
Keep the coordination and engagement of the financial sector close, especially CORFO with its financial intermediaries, to understand exactly what the banking sector requires. CORFO's knowledge will be very useful in this regard.	<p><u>Past activities:</u> The recommendation was addressed by the NSP-FC to ensure that CORFO's knowledge is properly utilised.</p> <p><u>Additional activities:</u> See additional activities under Recommendation 2.</p>	<p>NSP-FC, TSU</p> <p>National Implementing Partners and NSP-FC</p>	<p>Year 2019, during FC implementation</p> <p>During FC implementation</p>
Recommendation 5	Activities	Responsible Entity	Timeline
Explore the possibility of moving some of the NSP budget to beef up the sub-component "Training and Advisory Services for the FIs" to be used for additional requirements of technical assistance from the Financial Component,	<p><u>Ongoing activities:</u> The NAMA Facility enables NSPs to request budget re-allocation upon appropriate justification and in accordance with the Amendment Policy of the NAMA Facility.</p>	TSU, NSP	Ongoing

including the technical review of project feasibility studies. This could be delivered by ASE in collaboration with CORFO or it could be outsourced.			
Lesson 3: Improve visibility, dissemination and communication			
Recommendation 6	Activities	Responsible Entity	Timeline
Update the material produced by the Technical Component and continue to showcase good practices and current financial opportunities.	<p><u>Past activities:</u></p> <p>The TC was included in the portfolio of “4e”, the energy and climate programs implemented by GIZ on behalf of the German Government.</p> <p>Using this resource, the TC has updated its website www.4echile.cl/nama which now contains all the updated materials in an online library, in which materials can be searched, viewed and downloaded.</p>	NSP-TC	During TC implementation
Recommendation 7	Activities	Responsible Entity	Timeline
Diversify the media channels used by the NSP dissemination activities, to include also non-digitally educated stakeholders and rural or remote users.	<p>In 2020, the NAMA Facility published its Communication Guidelines aimed at streamlining communication activities around the NSPs. According to the Guidelines, each NSP must develop its own communication strategy based on the OASIS framework.</p> <p>The recommendation was brought to the attention of KfW as a DO for the NSP-FC.</p>	<p>TSU</p> <p>NSP-FC</p>	<p>2020 (ongoing)</p> <p>During FC implementation</p>
Recommendation 8	Activities	Responsible Entity	Timeline
Expand the target audience of the communication material to include a larger number of implementers associations, that can themselves amplify the NSP visibility (e.g. to rural users).	See activities under Recommendation 7.	TSU, NSP-FC	Ongoing, during FC implementation
Recommendation 9	Activities	Responsible Entity	Timeline

Explore working with implementers organisations or directly with SMEs that are already beneficiaries of other public agencies (e.g. CNR, ASE) to reach a wider audience of end-users and implementers.	<u>Ongoing activities:</u> The NAMA Facility grants NSPs significant autonomy and flexibility on the condition that NSPs remain additional and delineate from other ongoing initiatives financed by national governments or other donors. The definition of additionality is provided under the Monitoring and Evaluation Framework (M&E Framework) of the NAMA Facility.	TSU	Ongoing, the latest version of the M&E Framework was published in June 2020.
	<u>Additional activities:</u> The recommendation was brought to the attention of KfW as a DO for the NSP-FC.	NSP-FC	During FC implementation
Recommendation 10	Activities	Responsible Entity	Timeline
Use the activities under sub-component “Grants for Pre-Investment Studies” to provide close follow-ups on companies and bring the SSRE projects to the finish line as well as monitor the outcomes after the installations.	<u>Additional activities:</u> The recommendation was brought to the attention of KfW as a DO for the NSP-FC.	NSP-FC	During FC implementation
Recommendation 11	Activities	Responsible Entity	Timeline
Develop an awareness-raising strategy to include, for instance, the win-win concerning the alignment of climate actions with the COVID-19 recovery package.	<u>Ongoing activities:</u> Awareness-raising activities constitute an important part of all NSPs. In the guidance provided for Applicants / Applicant Support Partners (ASPs) and DOs (referred to as NAMA Support Organisations (NSOs) from the 4 th Call on), NAMA Facility encourages project stakeholders to properly account for the awareness-raising strategies and mechanisms. Considering that this part is usually covered by the TC, this is the rationale to have NSPs which include both TC and FC. In this context, considering the importance of a synergetic implementation of TC	TSU, Applicants / ASPs / NSOs	Ongoing; applicable to the NSPs from the 5 th Call onwards

	<p>and FC, starting from the 5th Call, the NAMA Facility differentiates between the two Implementation Phases (1 and 2) requiring the NSPs to have both TC and FC fully operational by the end of the Implementation Phase 1.</p> <p><u>Additional activities:</u> The NSP TC was very active in conducting awareness-raising. For Indicator M2, which refers to the number of people directly benefiting from the NSP, the target of 300 was surpassed, reaching 985 people in total. The TC actively supported almost 40 events in all 16 regions of Chile. To reach the target audience, the project collaborated with business associations and public institutions.</p> <p>The NSP's FC foresees the organisation of launch events for its financial products with a broad media coverage. One such event took place in March 2021 during the launch of the programme "Ponle Energía a tu Empresa", contributing to the NSP's subcomponent II that offers investment grants for SSRE technologies.</p>	NSP-TC, NSP-FC	During TC and FC implementation
Lesson 4: Broaden the view on coordination with available financial instruments beyond the Financial Component			
Recommendation 12	Activities	Responsible Entity	Timeline
Update the infographic created by the Technical Component that maps current financial initiatives related to SSRE and keep this as a live document by regularly monitoring the market developments. This should be done by building on existing resources that the MoE, CORFO or the Ministry of Finance may already have.	<p><u>Past activities:</u> In 2020, the TC developed infographics that provide users with an overview of the benefits of SSRE and publicly financed energy efficiency and renewable energy programs. The Ministry of Energy as well as Regional Ministerial Secretariats and other public institutions will use this infographic to promote EE and RE in various target sectors.</p> <p><u>Additional activities:</u></p>	NSP-TC	During TC implementation

	The recommendation was brought to the attention of KfW as a DO for the NSP-FC.	NSP-FC	During FC implementation
Recommendation 13	Activities	Responsible Entity	Timeline
The map of financial incentives should provide transparent information also on the available budgets and selection criteria behind different financial initiatives.	<u>Ongoing activities:</u> As part of the NSP Outline and subsequently the NSP Proposal development, the TSU requires Applicants / ASPs / NSOs to outline the ongoing initiatives in the (sub-) sector of the intervention and incorporate lessons learnt to ensure maximisation of the synergetic effects, while also guaranteeing additionality of the NSP.	TSU, Applicants / ASPs / NSOs	Ongoing
	<u>Additional activities:</u> KfW was advised to incorporate the recommendations of the TC's ELE in the FC implementation.	NSP-FC	During FC implementation
Recommendation 14	Activities	Responsible Entity	Timeline
Make full use of the NSP Steering Committee to apply the institutional knowledge of CORFO and the MoE to lead and coordinate the Financial Component activities in a complementary way with existing initiatives.	See activities under Recommendation 2.	TSU, NSP, National Implementing Partners	During TC and FC implementation
Recommendation 15	Activities	Responsible Entity	Timeline
Find the right entry points and niches in the SSRE market for the Financial Component's instruments to maximise their impact.	<u>Ongoing activities:</u> The TSU requests Applicants / ASPs / NSOs to conduct a comprehensive market analysis as part of the NSP Proposal development to ensure that the right "entry points" are identified before the NSP enters implementation (upon approval). The NSP Outline template, and in particular Annex 5a, updated before the launch of the Ambition Initiative Call (2020), also assume a preliminary market analysis is conducted to ensure that the	TSU, Applicants / ASPs / NSOs	Ongoing

	<p>NSP proposes adequate financial mechanisms to overcome the existing market barriers and constraints.</p> <p><u>Additional activities:</u> The recommendation was brought to the attention of KfW as a DO for the NSP-FC.</p>	NSP-FC	During FC implementation
Lesson 5: Improve coordination and alignment within the Chilean government			
Recommendation 16	Activities	Responsible Entity	Timeline
<p>Explore the opportunity of reforming the NSP governance to include a high-level political body (NSP Steering Board) and a technical advisory body (NSP Advisory Committee). Moreover, explore ways to include ASE, the Ministry of Finance, the Ministry of Environment, and/or other key government stakeholders in the NSP advisory governance.</p>	<p><u>Ongoing activities:</u> The NAMA Facility offers a high degree of flexibility to the NSPs through its Amendment Policy. At the same time, it is assumed that DOs / NSOs, being closely engaged with the national stakeholders and having deep knowledge of the local context, can define the most appropriate modality of delivering the NSP components.</p> <p>The TSU, and Desk Officers (DEOs) in particular, are always available to accompany NSPs if they consider / need a conceptual, institutional and/or budgetary change.</p>	TSU	Ongoing
Recommendation 17	Activities	Responsible Entity	Timeline
<p>Similarly to what was done for the Technical Component delivery, explore the possibility to build a KfW team to be based in Chile to work in proximity of the national implementing organisations.</p>	<p>See activities under Recommendation 16.</p>	TSU	Ongoing
Recommendation 18	Activities	Responsible Entity	Timeline
<p>Keep GIZ closely involved in the Financial Component's inception phase and potentially have regular exchanges with them later on, to ensure the institutional knowledge from the Technical Component is not lost.</p>	<p><u>Ongoing activities:</u> See activities under Recommendation 16.</p> <p><u>Additional activities:</u> As it is rightfully mentioned in the recommendation, the NAMA Facility does not foresee further support for the NSP's TC, which</p>	NSP-FC, National Implementing Partners	During FC implementation

However, this would depend on the resources provided by GIZ, as the NAMA Facility does not foresee any support in this regard.	was completed in December 2020. Nevertheless, the NSP's FC plans to use synergies with other technical assistance initiatives under Renewable Energy and Energy Efficiency Programmes of the German bilateral Cooperation with Chile financed by CORFO.		
Recommendation 19	Activities	Responsible Entity	Timeline
Facilitate GIZ's knowledge sharing with ASE during the handover process between the Technical and Financial Components. The handover is recommended, as it is not currently planned.	See activities under Recommendation 2 and 16.	TSU, NSP, National Implementing Partners	Ongoing; during TC and FC implementation
Recommendation 20	Activities	Responsible Entity	Timeline
Recommendation 20: Find ways to capitalise from the NSP-facilitated intra-government coordination to push ahead the addressing of the remaining SSRE market barriers, such as policy and regulatory barriers, and the harmonisation and transparency of the financial schemes and mechanisms.	See activities under Recommendation 2 and 16.	TSU, NSP, National Implementing Partners	Ongoing; during TC and FC implementation
Lesson 6: Support the shaping of a sustainable and fair SSRE market in Chile			
Recommendation 21	Activities	Responsible Entity	Timeline
Be present and close to decision-makers to influence and align their agenda with fostering a fairer and more competitive SSRE market.	See activities under Recommendation 2.	TSU, NSP, National Implementing Partners	During TC and FC implementation
Recommendation 22	Activities	Responsible Entity	Timeline
Design the financial instruments supported by the NSP to be inclusive of small and medium implementers and beneficiaries. Get the support of implementers associations and other key	See activities under Recommendation 16 as well as additional activities under Recommendation 11.	TSU, NSP-TC, NSP-FC	Ongoing; during TC and FC implementation

stakeholders to achieve such inclusiveness.			
Recommendation 23	Activities	Responsible Entity	Timeline
Improve the link with the industry sector and work together to strengthen the SSRE market niches through commercial opportunities.	<u>Ongoing activities:</u> NSPs are encouraged to consider all relevant stakeholders and engage actors that are crucial for the NSP's success. The guidance in this respect is provided in multiple NAMA Facility documents such as the General Information Documents (GIDs) for each call, NSP Outline and Proposal templates etc.	TSU, Applicants / ASPs / NSOs	Ongoing
Lesson 7: Exchange learning with other NSPs and initiatives, inside and outside of Chile			
Recommendation 24	Activities	Responsible Entity	Timeline
Be proactive in advocating for further learning exchange opportunities with other NSPs. This could involve one or more of the following: (i) exploring with the NAMA Facility TSU the possibility of additional knowledge-sharing events between multiple NSPs; (ii) discussing with the TSU the appropriateness of creating a knowledge management system to facilitate the sharing of know-how between the NSPs; (iii) directly approaching other relevant NSP teams (e.g. including building up previous exchanges with the Mexico Energy Efficiency NSP).	See activities under Recommendation 3.	NSP, TSU	Ongoing (since the 4 th Call / 6 th Call)
Recommendation 25	Activities	Responsible Entity	Timeline
Within Chile, continue to proactively look for learning exchange opportunities with other relevant initiatives, e.g. UK Embassy on their past and current projects in Chile as well as other global initiatives such as the UKEF Clean Growth Direct Lending Facility,	See activities under Recommendation 3.	NSP, TSU	Ongoing (since the 4 th Call / 6 th Call)

CAMCHAL's environment and energy programme, etc.			
--	--	--	--

Final Evaluation and Learning Exercise of the Technical Component of the “Chile Self- Supply Renewable Energy NAMA Support Project”

NAMA Support Project Evaluation and Learning
Exercises for the NAMA Facility

Transaction number: 81238912; Project processing number: 12.9097.2-108.00

Final Report

Luca Petrarulo, Tobias Kühner, Gerardo Canales Gonzalez

February 2021

About AMBERO Consulting Gesellschaft mbH

AMBERO Consulting provides services to our clients in the field of international development. Since 2003, we have supported national and international development agencies in the design, preparation, implementation, and monitoring of small and large projects that improve living conditions around the world.

At the heart of our work is a dynamic team integrated in interdisciplinary networks worldwide. Our strength is to generate, mobilise, and apply tailor-made knowledge. As a result, we are able to quickly initiate projects together with internationally recognised experts and established partners in many places around the world. The technical focus of our work is: good governance and civil society; climate, environment, and biodiversity; and regional and economic development.

About Oxford Policy Management

Oxford Policy Management (OPM) is committed to helping low- and middle-income countries achieve growth and reduce poverty and disadvantage through public policy reform.

We seek to bring about lasting positive change using analytical and practical policy expertise. Through our global network of offices, we work in partnership with national decision makers to research, design, implement, and evaluate impactful public policy.

We work in all areas of social and economic policy and governance, including health, finance, education, climate change, and public sector management. We draw on our local and international sector experts to provide the very best evidence-based support.

Disclaimer

The results and analysis included in the report are based on an external and independent evaluation conducted by the consortium AMBERO-OPM. The conclusions drawn in the report do not necessarily reflect the official views of the NAMA Facility and/or of the NAMA Support Project under evaluation.

AMBERO Consulting Gesellschaft mbH

Westerbachstraße 3
D-61476
Kronberg i.Ts
Deutschland

Tel: +49 6173 325 40 0
Fax: +49 6173 325 40 22
Email: info@ambero.de
Website: www.ambero.de

Oxford Policy Management Limited

Registered in England: 3122495

Level 3, Clarendon House
52 Cornmarket Street
Oxford, OX1 3HJ
United Kingdom

Tel: +44 (0) 1865 207 300
Fax: +44 (0) 1865 207 301
Email: admin@opml.co.uk
Website: www.opml.co.uk
Twitter: [@OPMglobal](https://twitter.com/OPMglobal)
Facebook: [@OPMglobal](https://www.facebook.com/OPMglobal)
YouTube: [@OPMglobal](https://www.youtube.com/OPMglobal)
LinkedIn: [@OPMglobal](https://www.linkedin.com/company/OPMglobal)

Preface

The NAMA (Nationally Appropriate Mitigation Actions) Facility was established in 2013 and has since received support from donors including Denmark, the European Union, Germany, and the United Kingdom. The NAMA Facility's vision is to 'accelerate carbon-neutral development to keep temperature increases to well below two degrees Celsius by supporting NAMA Support Projects (NSPs) that effect sector-wide shifts toward sustainable, irreversible, carbon-neutral pathways in developing countries and emerging economies. All NSPs with an overall duration of more than three years are subject to a mid-term and to a final evaluation and learning exercise.

The NAMA Facility's Technical Support Unit (TSU) functions as the secretariat of the NAMA Facility. The TSU commissioned AMBERO and Oxford Policy Management to conduct mid-term and final Evaluation and Learning Exercises (ELEs) for NSPs from calls 1, 2, 3 and 4.

Each ELE is conducted using the same Theoretical Framework (FW), which involves the application of a document review, participatory workshops, and stakeholder interviews to collect evidence about NSPs' results and lessons analysed using a Theory-based approach centred on the use of contribution analysis reinforced by elements of process tracing.

This document presents the findings of the **final ELE of the Technical Component of the Chile Self-Supply Renewable Energy (SSRE) NSP**. The report has been reviewed by Katherine Cooke (Interim International Expert A, NSP ELE Team) and Simon Trace (Principal Consultant, OPM). For further information, please contact vera@ambero.de.

Executive summary

This document presents the findings of the **final ELE of the Technical Component of the Chile Self-Supply Renewable Energy (SSRE) NSP**. The ELE was undertaken during the period September-February 2021. In accordance with the Terms of Reference¹, this ELE sought to address the following questions:

- Has the NSP been achieving its results?
- Has the NSP started to trigger transformational change?
- What was learnt from the NSP so far?

More information about the focus of this ELE and on the methodology followed can be found in Section 1.2 and Section 2, respectively.

In 2013, GIZ (German Development Cooperation) and KfW (German Development Bank), in their role of Delivery Organisations (DOs), prepared and submitted to the NAMA Facility a proposal for the **NAMA support project (NSP) “Self-Supply Renewable Energy” (SSRE). The objective of the SSRE NSP is to strengthen the development of the self-supply renewable energy market in Chile by promoting the incorporation of SSRE systems in small and medium enterprises (SMEs).** The proposal was developed with the leadership and collaboration from the Renewable Energy Centre (Centro de Energías Renovables – CER), which was part of CORFO (Economic Development Agency of the Ministry of Economy), the Ministry of Environment, the International Cooperation Agency (AGCI), GIZ, and KfW. The SSRE NSP’s **Technical Component** aims to increase technical capacities for the implementation and demand for SSRE investment projects through: (i) outreach and awareness raising about the economic and technological feasibility of SSRE projects amongst relevant private and public decision makers, (ii) capacity building of relevant stakeholders, mainly SSRE project implementers, through professional training, (iii) support for SSRE project preparation through appraisals and new business cases and (iv) design and operation of a Monitoring, Reporting and Verification (MRV) system for SSRE projects. The **Financial Component** of the project aims at the introduction of SSRE in the market by creating efficient and suitable access to financial instruments that reduce risk and mobilise private sector investments for SSRE. The implementation and adequate use of a mix of financial instruments will be backed by training for financing institutions (FIs) and the development of a bankable project pipeline.

This report presents the findings of the Evaluation and Learning Exercise (ELE) of the Chile SSRE NSP. The ELE was supposed to cover both the Technical and Financial Components that were due to be completed by February 2019. However, for reasons as described in Section 1.1, the actual implementation status sees the Technical Component ending by December 2020, while the Financial Component is expected to start at the beginning of 2021 and it is going to run until 2024. This means that there will be no implementation overlap between the two NSP components. Therefore, **this can be considered as the final evaluation of the Technical Component only.** The ELE focused on the achievements of and lessons learnt from the Technical Component implementation in light of the handover to the Financial Component. The ELE had three main Evaluation Questions (EQs) to focus

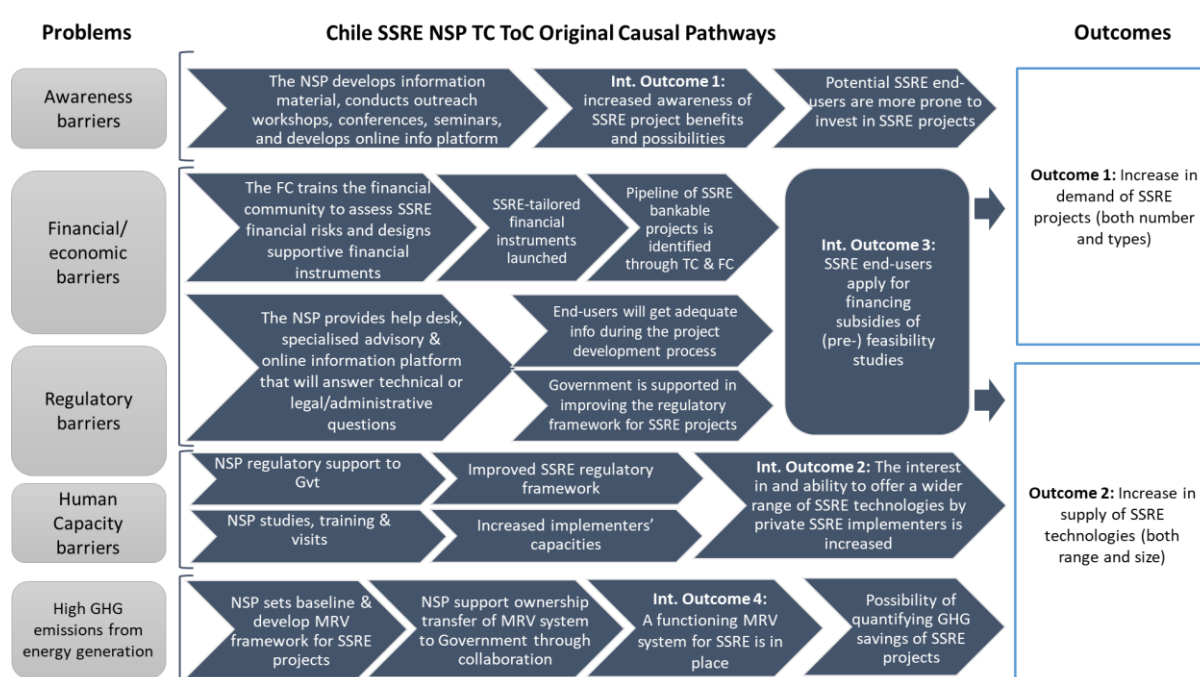
¹ The ELE Terms of Reference is provided in Annex G.

on: (i) Has the NSP been achieving its results? (ii) Has the NSP started to trigger transformational change? (iii) What was learnt from the NSP so far?

The Chile SSRE NSP seeks to address four main barriers preventing the uptake of SSRE technologies by Chilean SMEs: (i) financial and economic barriers; (ii) human capacity barriers; (iii) awareness barriers; and (iv) policy and regulatory barriers. In order to address these barriers, the NSP follows its Theory of Change, which can be exemplified by showing the causal pathways the NSP planned to follow to move from the problem to its intended outcomes. The identified causal pathways are four and are illustrated in Figure ES-1.

The NSP is strongly aligned with global and national agendas for sustainable development and climate change. Chile's National Government is committed to climate and clean energy agendas that the NSP is helping to strengthen and deliver. There is ample evidence that the SSRE market in the past 5 years has been booming in Chile. However, lack of awareness, technical capacity, and access to finance have been widely cited as remaining key gaps for end-users, which shows that the NSP has been addressing relevant needs of this market. Since financing is a big barrier for SSRE implementers and end-users, the delay of the Financial Component has made the NSP less relevant to them.

Figure ES-1: Causal Pathways of the Theory of Change of the Chile SSRE NSP (Technical Component focus)



Note: TC = Technical Component; FC = Financial Component

In terms of the NSP's current contribution to its Intermediate Outcomes (see Figure 2 in Section 2), the ELE found the NSP Technical Component has worked very effectively:

- **Intermediate Outcome 1 – Increased awareness of SSRE among end-users (Green²):** The Technical Component has worked extensively to raise awareness of the different SSRE options

² The legend of the rating is the following: Good / Very good = Green; Problems = Amber; Serious deficiencies = Red.

and benefits, and awareness levels in key national stakeholders have increased as direct contribution of the Technical Component. Interviewed stakeholders consistently reported high appreciation from users of both awareness events and material.

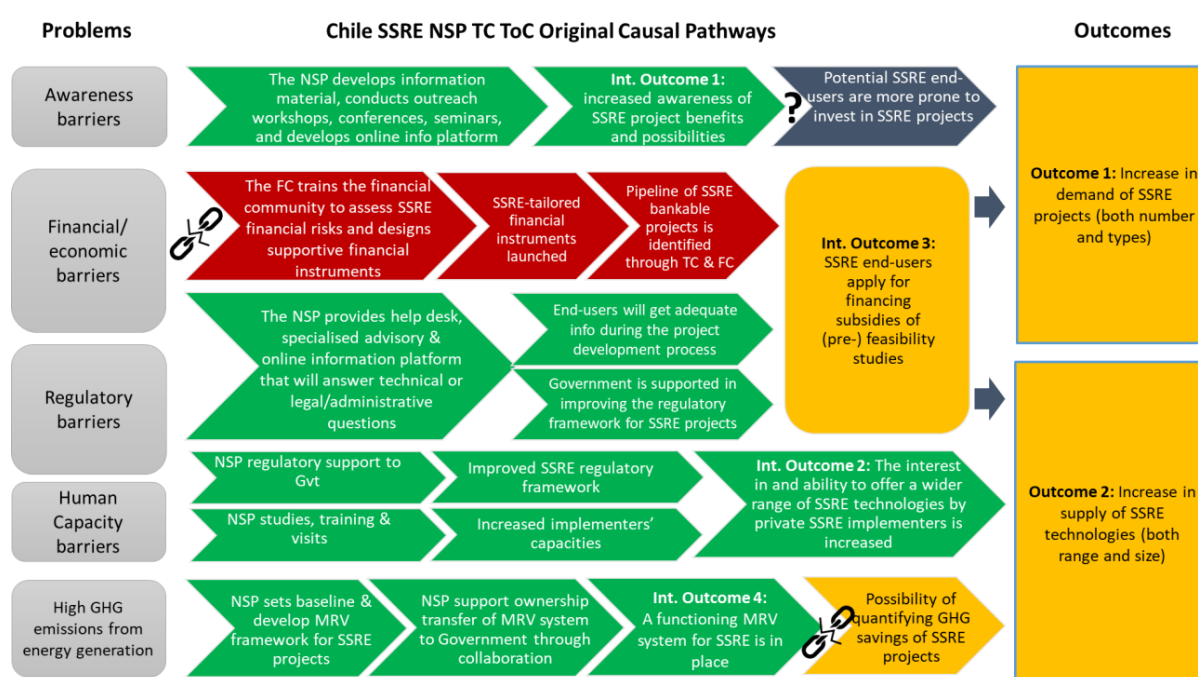
- **Intermediate Outcome 2 – Increased number of SSRE implementers (Green):** The Technical Component was very prolific in developing support tools and technical studies as well as delivering training, good practice site visits and international study tours to Europe. In general, the ELE interviews consistently confirmed the tools, assistance and capacity building provided were helpful and the knowledge created by these outputs is being used by SSRE implementers. The ELE also evidenced sufficient flexibility of the NSP to understand the need for policy and regulatory framework support, which resulted in an amendment request to allocate the relevant activities. However, despite the support provided by the NSP to the government, there is some evidence that the regulatory framework still needs to be improved (see Section 4.2.2 for details). In conclusion, the ELE generally confirms that the Technical Component has directly contributed to building the capacity of SSRE implementers and increasing their interest in and ability to offer a wider range of SSRE technologies.
- **Intermediate Outcome 3 – Increase in SSRE end-users applying for financing subsidies for (pre-)feasibility studies (Amber):** Through technical assistance, the NSP directly contributed to improve the national SSRE policy and regulatory framework, helped SSRE end-users in better assessing the key technical requirements and economic costs and benefits of their SSRE opportunities, and identified a list of potential projects for the Financial Component. Nevertheless, Intermediate Outcome 3 has not been achieved, substantially because of the absence of the Financial Component. More details are provided in Section 4.2.3.
- **Intermediate Outcome 4 – A functioning MRV system for SSRE is in place (Green):** The ELE found the Ministry of Energy (MoE) has been closely involved by GIZ in the development of the MRV system for SSRE projects. The MoE has been very satisfied with quality and robustness of the SSRE MRV system; in fact, it requested support to develop and test a second MRV system for large-scale RE, which can be considered as an additional outcome of the project. In terms of supporting the MRV system's functioning, the Technical Component appears to have put in place an appropriate framework for the MoE to own and operate the RE MRV systems. In addition, by applying the MRV systems on RE projects in Chile, the NSP contributed to improve the transparency of the RE sector, another positive unexpected outcome. Finally, the NSP MRV system appears to be generally in line with the national MRV system led by the Ministry of Environment.

Although the ELE was focusing on identifying evidence about the results of the Technical Component, the interviews and workshops also surfaced **evidence on the key risks and opportunities for the Financial Component, as well as on the appropriateness of its strategy**. From the interviews, the Financial Component strategy appears to be adequate to address the barriers to access finance for SSRE. Some of the success factors will be: (i) continuation of technical backstopping; (ii) appropriateness of the content and delivery of the capacity building to FIs; (iii) appropriateness of the financing mechanisms to the SSRE market; (iv) coordination and complementarity of the NSP activities and the initiatives on the market; (v) internalisation of externalities; and (vi) finding its own market niche and added value to the market. More details are provided in Section 4.2.5.

The evidence from the ELE suggests the SSRE sector will be important to achieve Chile's decarbonisation goals of its energy mix for the next 10-15 years. Therefore, a clear causal link between the achievement of the NSP outcome of "strengthening the SSRE market in Chile" and its overarching impact in the ToC can be validated by the ELE. **Unfortunately, because of the lack of Financial Component, at this point, no additional SSRE installed capacity is attributable to the NSP. Concerning the Technical Component's direct contribution to the NSP impact, it has contributed with key analysis and data, which has accelerated different policy and market advancements (see evidence in Section 4).** Nevertheless, there are still key risks in not having the Technical Component running concurrently to the Financial Component, which makes it difficult to say at this point if the NSP will have a sustained impact.

Figure ES-2 goes back to the NSP Theory of Change to test to what extent the original causal pathways and assumptions behind them have held. What transpires from it is that, whenever the Technical Component did not have to substantially rely on the Financial Component to achieve the intermediate outcomes, the NSP causal pathways seem to have held well. The other conclusion coming from Figure ES-2 is that **the Technical Component has taken the NSP as far on its ToC as it could, and for the NSP to achieve its intended outcomes and contribute to its transformational change impact, the success of the Financial Component will be crucial.**

Figure ES-2: Overview of NSP Causal Pathways Assessment (Technical Component focus)



Note: TC = Technical Component; FC = Financial Component

In regard to the NSP's sustainability, in general, the strong alignment of the NSP's goals to the government's long-term climate and sustainable development agenda, coupled with the persistent needs of the SSRE market for improved financial accessibility, are indicative factors about the **high likelihood of long-term sustainability of the NSP outcomes**. Positively, the MoE shows evidence of strong ownership of the NSP and seems to be ready to provide continuation to key NSP products. However, several stakeholders noted that the handover process from the Technical to the Financial Component could be a main challenge and might fail, if GIZ is not appropriately involved in the

planning of the Financial Component. Furthermore, the future lack of technical support through the Technical Component might be a big challenge for the NSP's sustainability.

The evidence gathered and the discussions occurred during the ELE helped identify lessons from the Technical Component implementation to the benefit of the continuation of the NSP. A summary of the evidence and lessons is presented in Section 6.1. **As a result of the learning analysis, 7 key needs for a successful continuation of the NSP have been identified:**

1. Maintain flexibility in the project focus to respond to context changes
2. Keep technical assistance and capacity building for the financial sector as a high priority
3. Improve visibility, dissemination and communication
4. Broaden the view on and coordination with available financial instruments beyond the Financial Component
5. Improve coordination and alignment with the Chilean government
6. Support the shaping of a sustainable and fair SSRE market in Chile
7. Exchange learning with other NSPs and initiatives, inside and outside of Chile

The table below presents the ELE's key recommendations grouped under the 7 key needs listed above:

Lesson	Recommendation
1. Maintain flexibility in the project focus to respond to context changes	<ul style="list-style-type: none"> • Keep the NSP objectives central by having KfW playing the role of “guardian” of the NSP ToC and the alignment with NAMA Facility ToC, without losing the flexibility and balance to be able to include goals useful to the local implementing partners too. • Create a high-level political coordination table (see recommendation n. 5) to keep the Financial Component aligned and coordinated, thus avoiding overlaps with other existing mechanisms. • Institute an internal NSP learning mechanism to monitor the outcomes and learning from the implementation of the Financial Component and subsequently adapt it.
2. Keep technical assistance and capacity building for the financial sector as a high priority	<ul style="list-style-type: none"> • Keep the coordination and engagement of the financial sector close, especially CORFO with its financial intermediaries, to understand exactly what the banking sector requires. CORFO's knowledge will be very useful in this regard. • Explore the possibility of moving some of the NSP budget to beef up the sub-component “Training and Advisory Services for the FIs” to be used for additional requirements of technical assistance from the Financial Component, including the technical review of project feasibility studies. This could be delivered by ASE in collaboration with CORFO or it could be outsourced.
3. Improve visibility, dissemination and communication	<ul style="list-style-type: none"> • Update the material produced by the Technical Component and continue to showcase good practices and current financial opportunities. • Diversify the media channels used by the NSP dissemination activities, to include also non-digitally educated stakeholders and rural or remote users. • Expand the target audience of the communication material to include a larger number of implementers associations, that can themselves amplify the NSP visibility (e.g. to rural users). • Explore working with implementers organisations or directly with SMEs that are already beneficiaries of other public agencies (e.g. CNR, ASE) to reach a wider audience of end-users and implementers.

Lesson	Recommendation
	<ul style="list-style-type: none"> • Use the activities under sub-component “Grants for Pre-Investment Studies” to provide close follow-ups on companies and bring the SSRE projects to the finish line as well as monitor the outcomes after the installations. • Develop an awareness-raising strategy to include, for instance, the win-win concerning the alignment of climate actions with the COVID-19 recovery package.
4. Broaden the view on and coordination with available financial instruments beyond the Financial Component	<ul style="list-style-type: none"> • Update the infographic created by the Technical Component that maps current financial initiatives related to SSRE and keep this as a live document by regularly monitoring the market developments. This should be done by building on existing resources that the MoE, CORFO or the Ministry of Finance may already have. • The map of financial incentives should provide transparent information also on the available budgets and selection criteria behind different financial initiatives. • Make full use of the NSP Steering Committee to apply the institutional knowledge of CORFO and the MoE to lead and coordinate the Financial Component activities in a complementary way with existing initiatives. • Find the right entry points and niches in the SSRE market for the Financial Component’s instruments to maximise their impact.
5. Improve coordination and alignment within the Chilean government	<ul style="list-style-type: none"> • Explore the opportunity of reforming the NSP governance to include a high-level political body (NSP Steering Board) and a technical advisory body (NSP Advisory Committee). Moreover, explore ways to include ASE, the Ministry of Finance, the Ministry of Environment, and/or other key government stakeholders in the NSP advisory governance. • Similarly to what was done for the Technical Component delivery, explore the possibility to build a KfW team to be based in Chile to work in proximity of the national implementing organisations. • Keep GIZ closely involved in the Financial Component’s inception phase and potentially have regular exchanges with them later on, to ensure the institutional knowledge from the Technical Component is not lost. However, this would depend on the resources provided by GIZ, as the NAMA Facility does not foresee any support in this regard. • Facilitate GIZ’s knowledge sharing with ASE during the handover process between the Technical and Financial Components. The handover is recommended, as it is not currently planned. • Find ways to capitalise from the NSP-facilitated intra-government coordination to push ahead the addressing of the remaining SSRE market barriers, such as policy and regulatory barriers, and the harmonisation and transparency of the financial schemes and mechanisms.
6. Support the shaping of a sustainable and fair SSRE market in Chile	<ul style="list-style-type: none"> • Be present and close to decision-makers to influence and align their agenda with fostering a fairer and more competitive SSRE market. • Design the financial instruments supported by the NSP to be inclusive of small and medium implementers and beneficiaries. Get the support of implementers associations and other key stakeholders to achieve such inclusiveness. • Improve the link with the industry sector and work together to strengthen the SSRE market niches through commercial opportunities.
7. Exchange learning with	<ul style="list-style-type: none"> • Be proactive in advocating for further learning exchange opportunities with other NSPs. This could involve one or more of the following: (i) exploring with

Lesson	Recommendation
other NSPs and initiatives, inside and outside of Chile	<p>the NAMA Facility TSU the possibility of additional knowledge-sharing events between multiple NSPs; (ii) discussing with the TSU the appropriateness of creating a knowledge management system to facilitate the sharing of know-how between the NSPs; (iii) directly approaching other relevant NSP teams (e.g. including building up previous exchanges with the Mexico Energy Efficiency NSP).</p> <ul style="list-style-type: none">• Within Chile, continue to proactively look for learning exchange opportunities with other relevant initiatives, e.g. UK Embassy on their past and current projects in Chile as well as other global initiatives such as the UKF Clean Growth Direct Lending Facility, CAMCHAL's environment and energy programme, etc.

Table of contents

Preface	i
Executive summary	ii
Table of contents	ix
List of tables, figures, and boxes.....	xi
List of abbreviations.....	xii
1 Introduction.....	1
1.1 Overview of the NSP	1
1.2 Focus of the Evaluation and Learning Exercise.....	2
2 Methodological approach	4
3 NSP Theory of Change	8
4 Key Findings.....	11
4.1 Relevance of the NSP	11
4.2 Achievement of the NSP Outcomes	14
4.3 Impact of the NSP	11
4.4 Efficiency of the NSP	28
4.5 Sustainability of the NSP.....	29
5 Conclusions.....	32
6 Lessons and recommendations for the continuation of the NSP.....	34
6.1 Key lessons.....	34
6.2 Recommendations to the benefit of the Financial Component.....	37
Annex A Theory of Change of the Chile SSRE NSP	40
Annex B Evaluation and learning exercise matrix	42
Annex C Evidence and answers to the ELE matrix.....	48
Annex D Validity of the causal pathways using process tracing tests	74
Annex E NSP achievements against logframe indicators	76
E.1 Impact indicators	76
E.2 Outcome indicators	76
E.3 Output indicators.....	77
Annex F List of ELE sources.....	79
F.1 Internal documents	79
F.2 List of organisations interviewed.....	81
Annex G Terms of Reference of the Chile SSRE NSP ELE	83

G.1	Background	83
G.2	Terms of reference	83
G.3	Suggested staff	84
G.4	Timing	84

List of tables, figures, and boxes

Table 1: General and specific ELE questions.....	3
Table 2: Overview of number of interviews and interviewees by sampling category.....	4
Table 3: Score card for assessing the strength of evidence.....	6
Table 4: Evaluation Question 1	11
Table 5: Evaluation Question 2	14
Table 6: Evaluation Question 4	26
Table 7: Evaluation Question 3	28
Table 8: Evaluation Question 5	29
Table 9: Recommendations to the benefit of the Financial Component	37
Figure 1: Summary of the ELE Analysis Methodology	5
Figure 2: Theory of Change of the Chile Self-Supply Renewable Energy NAMA Support Project	8
Figure 3: Causal Pathways of the Theory of Change of the Chile SSRE NSP	9
Figure 4: Overview of NSP Causal Pathways Assessment (Technical Component focus)	32

List of abbreviations

ACERA	Chilean Association of Renewable Energies and Storage (Asociación Chilena de Energías Renovables y Almacenamiento)
ACESOL	Chilean Association of Solar Energy (Asociación Chilena de Energía Solar)
AGCI	Chilean Agency for International Development Cooperation (Agencia Chilena de Cooperación Internacional para el Desarrollo)
ANESCO	National Association of Energy Efficiency Enterprises (Asociación Nacional de Empresas de Eficiencia Energética)
ASE	Chile's Sustainable Energy Agency (Agencia de Sostenibilidad Energética)
BMU	German Ministry for the Environment, Nature Conservation, and Nuclear Safety
CAMCHAL	German-Chilean Chamber of Commerce and Industry (Cámara Chileno-Alemana de Comercio e Industria)
CER	Renewable Energy Center (Centro de Energías Renovables)
CNR	National Irrigation Commission (Comisión Nacional de Riego)
CORFO	Production Development Corporation (Corporación de Fomento de la Producción de Chile)
COVID-19	Corona Virus Disease 2019
DSE	Division of Sustainable Energy, Ministry of Energy
ELE	Evaluation and Learning Exercise
ELEQ	Evaluation and Learning Exercise Question
EQ	Evaluation Question
ESCO	Energy Service Company
EUR	Euro
FC	Financial Component
FI	Financial Institution
FW	Framework
GHG	Greenhouse Gases
GIZ	Gesellschaft für Internationale Zusammenarbeit
GoC	Government of Chile

INDAP	Agricultural Development Institute of Chile
KfW	KfW Development Bank (KfW – Kreditanstalt für Wiederaufbau)
KII	Key Informant Interview
LEDs	Low-Emissions Development Strategy
Logframe	Logical Framework
M&E	Monitoring and Evaluation
MMA	Ministry of Environment, Chile (Ministerio de Medio Ambiente)
MoE	Ministry of Energy, Chile
MoU	Memorandum of Understanding
MRV	Measuring, Reporting, and Verification
NAMA	Nationally Appropriate Mitigation Action
NDC	Nationally Determined Contributions
NSP	NAMA Support Project
NS	NSP Stakeholder
NT	NSP Team
OECD DAC	Organisation for Economic Co-operation and Development's Development Assistance Committee
OPM	Oxford Policy Management
PANCC	Climate Change National Action Plan (Plan de Acción Nacional de Cambio Climático)
PMGD	Small Means of Distributed Generation (Pequeños Medios de Generación Distribuida)
PMR	Partnership for Market Readiness
PV	Photovoltaic
QA	Quality Assurance
QC	Quality Control
RAG	Red Amber Green
RE	Renewable Energy

SEC	Superintendence of Electricity and Fuels (Superintendencia de Electricidad y Combustibles)
Sercotec	Technical Cooperation Service, Chile
SME	Small and Medium Enterprise
SSRE	Self-Supply Renewable Energy
TC	Technical Component
ToC	Theory of Change
TP	Third Party
TS	Types of Sources
TSU	Technical Support Unit, NAMA Facility
UNIDO	United Nations Industrial Development Organization

1 Introduction

1.1 Overview of the NSP

In 2013, GIZ (German Development Cooperation) and KfW (German Development Bank), in their role of Delivery Organisations, prepared and submitted to the NAMA Facility a proposal for the **NAMA support project (NSP) “Self-Supply Renewable Energy” (SSRE). The objective of the SSRE NSP is to strengthen the development of the self-supply renewable energy market in Chile by promoting the incorporation of SSRE systems in small and medium enterprises (SMEs). The proposal was** developed with the leadership and collaboration from the Renewable Energy Centre (Centro de Energías Renovables – CER), which was part of CORFO (Economic Development Agency of the Ministry of Economy), the Ministry of Environment, the International Cooperation Agency (AGCI), GIZ, and KfW. This NSP was selected under the First Call of the NAMA Facility and developed into a Final Proposal. After its approval, implementation of the Technical Component started in April 2017, and it was delivered by GIZ (Delivery Partner) and the Ministry of Energy (MoE – Implementing Partner). The proposal for the Financial Component of the SSRE NSP was presented to the NAMA Facility by KfW in June 2017 and after several postponements, implementation is expected to start at the beginning of 2021.

The SSRE NSP’s **Technical Component** aims to increase technical capacities for the implementation and demand for SSRE investment projects through: (i) outreach and awareness raising about the economic and technological feasibility of SSRE projects amongst relevant private and public decision-makers, (ii) capacity building of relevant stakeholders, mainly SSRE project implementers, through professional training, (iii) support for SSRE project preparation through appraisals and new business cases and (iv) design and operation of a Monitoring, Reporting and Verification (MRV) system for SSRE projects. The **Financial Component** of the project aims at the introduction of SSRE projects in the market by creating efficient and suitable access to financial instruments that reduce risk and mobilise private sector investments for SSRE. The implementation and adequate use of a mix of financial instruments will be backed by training of financing institutions (FIs) and the development of a bankable project pipeline.

The implementation of the NSP is led by the MoE, which has the political mandate for the Chilean Government to implement the National Energy Policy and promote the incorporation of renewable energy in the country’s energy mix. For the implementation of the Technical Component the MoE works directly with GIZ as Delivery Partner. To execute the activities planned for the NSP, GIZ hired staff that will remain on the project until the end of the Technical Component implementation period, and who were assigned offices at the MoE. The NSP’s Technical Component has a Steering Committee in place, that meets regularly, and includes representatives from both organisations. At this Steering Committee, strategic and executive decisions are made in order to maintain frequent communication and alignment between the NSP and MoE’s other initiatives related to the promotion of SSRE in Chile. In addition, in 2020 a Directive Committee composed by representatives from the MoE, CORFO, GIZ and KfW was created. Its main objective is to provide a strategic view over both components to ensure a successful implementation and coordination of the NSP activities.

It is important to notice that the approval and set-up of the Financial Component of the NSP has suffered from substantial delays. In the original NSP proposal, both components were expected to begin together and operate in synergy. The first delays were reported in 2016, i.e. even before the formal approval of the Technical Component, and were related to the exchange of verbal notes between the governments of Chile and Germany, a formal process needed to allow the transfer of official aids. This meant that neither NSP components could officially begin until the verbal notes were signed in the second half of 2017. The impact of this initial delay was mitigated by approving a no-cost extension to the end date of the Technical Component from February 2019 to June 2020, and subsequently to December 2020. After the signature of the verbal notes, the Financial Component was expected to start in January 2018. However, its official approval took two full years (January 2020), while its final set-up is still pending, and the Financial Component is now due to begin the implementation at the beginning of 2021 and it is likely to run until the end of 2024 (timeline to be officially confirmed). This means that there will be no implementation overlap between the two NSP components. Although the investigation of the reasons behind the delays in the Financial Component's approval was beyond the ELE's scope (see the next section), the ELE Team understood that such delays were caused by the concomitance of several issues, including: (i) indecision by the Chilean government on the appropriate governance arrangements for the Financial Component, originally involving the International Cooperation Agency (AGCI, part of the Ministry of Foreign Affairs) to be indicated as responsible for the reception and administration of the NAMA Facility's funds, and then moving to bypass AGCI and giving direct responsibility of the Financial Component to MoE and CORFO; (ii) a series of institutional changes and staff turnover within CORFO that moved the responsibility for the NSP several times, including deciding to assign the Technical Component to the MoE and sharing with them the Financial Component's responsibility, which meant the component's strategy had to be explained and negotiated multiple times; and (iii) widespread social unrest since the end of 2019³ and the COVID-19 pandemic in 2020, which affected the ability of the government to move swiftly in operationalising the Financial Component by the beginning of 2020 after the contracts signing in December 2019.

1.2 Focus of the Evaluation and Learning Exercise

In accordance with the Terms of Reference for the Evaluation and Learning Exercise (ELE) as a whole⁴, the specific ELE for the Chile SSRE NSP seeks to address the following questions:

- Has the NSP been achieving its results?
- Has the NSP started to trigger transformational change?
- What was learnt from the NSP so far?

Although this ELE was expected to be a final evaluation of both components of the Chile SSRE NSP, as explained above, delays in the exchange of verbal notes, combined with further complications in starting delivery of the Financial Component, have meant that the latter component is yet to begin. **This ELE will therefore be treated as a final evaluation of the Technical Component only**, which will end in December 2020, i.e. two months after the data collection for this ELE. In addition, it will highlight lessons from the Technical Component that can be transferred and applied to the Financial

³ For more information on the 2019-2020 Chilean protests and social unrest you can visit:

https://en.wikipedia.org/wiki/2019%E2%80%932020_Chilean_protests.

⁴ The ELE Terms of Reference is provided in Annex G.

Component's continuation. **No evaluation and learning of the Financial Component can be made at this stage.**

Focusing on the ELE of the Technical Component, the general ELE Questions (ELEQs) presented above were broken down and operationalised in specific questions that are answered in this report (**Error! Reference source not found.**). In the table, the questions are then mapped against the Organisation for Economic Co-operation and Development's Development Assistance Committee's (OECD DAC) evaluation criteria⁵, which are widely used as international standards for evaluations of development interventions. Finally, the specific ELEQs were broken down further into sub-questions, which are included in the official ELE Matrix, approved by the NAMA Facility Technical Support Unit (TSU), and reported in Annex B.

Table 1: General and specific ELE questions

General ELE Question	Specific ELE Question	OECD DAC Criterion
Has the NSP been achieving its results?	1. To what extent does the NSP address an identified need (by national government, SMEs and project developers)?	Relevance
	2. To what extent has the implementation of the NSP been achieving its intended outcomes?	Effectiveness
	3. To what extent is the relationship between inputs and outputs timely and to expected quality standards?	Efficiency
Has the NSP been achieving its results?	4. What evidence is there that the NSP is likely to contribute to the intended impact in the Theory of Change (incl. transformational change), as well as any unintended or unexpected ones?	Impact
	5. What is the likelihood that the outcomes will be sustained after the end of the NSP funding period?	Sustainability
What has been learnt from the NSP so far?	6. What key lessons can be learnt to the benefit of the Financial Component or other NSPs in achieving their results?	Learning

⁵ Relevance, Effectiveness, Efficiency, Impact, Sustainability. The ELE Team added a 6th criteria, namely Learning.

2 Methodological approach

The ELE entailed activities under 4 main phases: inception, fieldwork, analysis, and reporting and presentation.

During the Inception Phase, the ELE Team conducted a review of key NSP documentation including the NSP Proposal, Annual and Semi-Annual Reports, the NSP M&E Framework, the NSP Logical Framework (Logframe), and key deliverables to show evidence of what was reported (see full list of documents reviewed in Annex F). Following that, the team used the information from the document review to **develop a retrospective Theory of Change (ToC) diagram** (see Annex A for the validated version).

The data from the document review and the ToC served as reference point to **develop a tailored matrix including the ELEQs** (ELE Matrix – see Annex B), which the ELE Team then **integrated with the initial hypotheses** to be tested during the fieldwork. At the same time, the ELE Team worked on the organisation of the fieldwork interviews. For that, **they applied a purposeful sampling of the key informants according to their level of involvement with the NSP**. In this way, the ELE Team grouped them in **3 general categories: (i) NSP Team**, i.e. members of the NSP Delivery Partners and Implementing Partners, the performance of whom is directly assessed by the ELE; **(ii) NSP Stakeholders**, i.e. individuals who have actively supported one or more NSP activities; and **(iii) Third Parties**, i.e. individuals who received one or more NSP activities (e.g. were part of the audience of an event or training), or who were not involved with the NSP, but are working on similar or relevant issues. This helped the ELE Team to test and triangulate the evidence and, as explained later in this section, to assess the strength of the evidence. Table 2 summarises the number of interviews and people interviewed (some calls had multiple interviewees) by each sampling category. To put the actual number of interviewees for this ELE into perspective, the Theoretical Framework of the NAMA Facility ELE programme suggests having a sample size of 30 individuals minimum for an ELE. For a detailed list of the institutions and organisations interviewed, refer to Annex F.

Table 2: Overview of number of interviews and interviewees by sampling category

	NSP Team	NSP Stakeholders	Third Parties	TOTAL
No. interviews	8	8	12	28
No. interviewees	14	10	18	42

The Fieldwork Phase began with an ELE Kick-Off Workshop. The workshop was conducted in a virtual setting and was attended by 10 participants from the NSP Delivery Partner of the Technical Component⁶ (GIZ) and ELE teams. The purpose of the workshop was to review, clarify and validate: (i) purpose, scope and expectations of the ELE and (ii) the NSP's ToC. During the workshop, after an introduction, a Q&A session on the ELE purpose and scope, and a discussion about the NSP Team's expectations from it, the NSP Team had the chance to present their understanding of the key elements

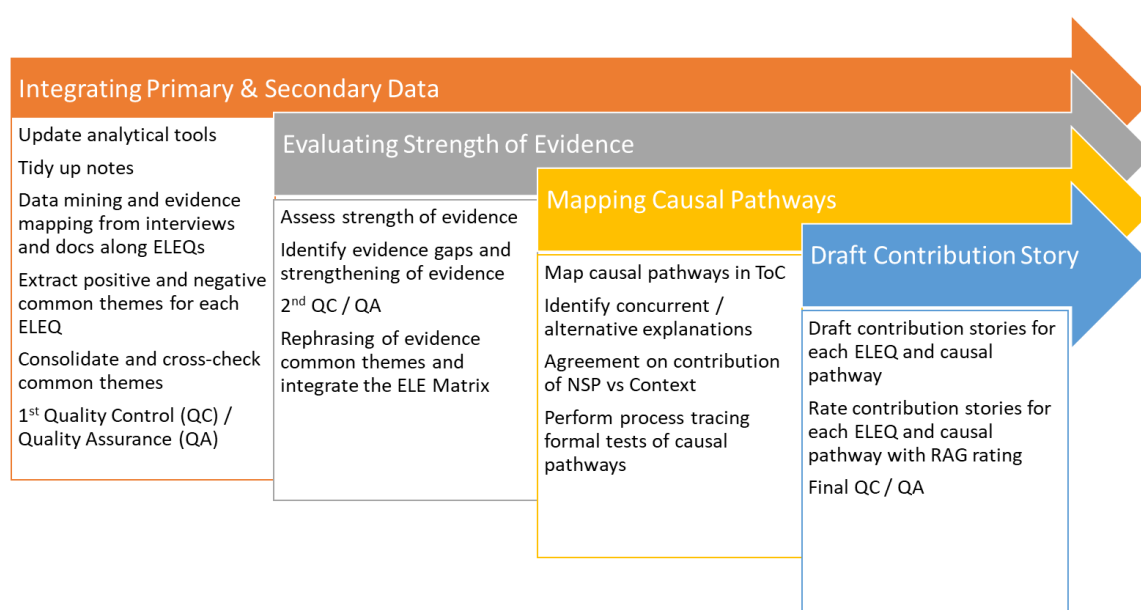
⁶ Unfortunately, the NSP Delivery Partner of the Financial Component (KfW) was not available for the date of the ELE Kick-Off Workshop.

of the NSP ToC. This was followed by questions from the ELE Team. Ensuing, the roles were inverted and the ELE Team presented their point of view on the NSP ToC. **The key outcome of the Kick-Off Workshop was the finalisation of a validated NSP ToC diagram** (see Annex A).

The initial workshop was followed by **9 days of primary data collection using in-depth interviews with the NSP Team and Key Informant Interviews (KIIs) with NSP Stakeholders and Third Parties**. The **general ELE Interview Guides** prepared during the inception phase **were reviewed and tailored to the specific interviews on a daily basis**. The questionnaires followed the ELEQs and the general structure was kept consistent among interviewees from the same sampling category, but the contents and wording of the questions were tailored to capture key knowledge from specific informants, cover knowledge gaps, or simply test hypotheses or triangulate specific information. Each interview was recorded, having received permission from the interviewees. All recordings have been kept confidential within the ELE Team and will be destroyed after the ELE report is approved. **Following the intense period of interviews, the ELE Team was able to brainstorm and update the ELE Matrix with more complete and updated versions of the preliminary answers**. The updated ELE Matrix was used to develop the slides for the **ELE Validation Workshop**, also held in a virtual setting, this time, with the NSP Delivery Partners of both the Technical and Financial Components. The main objectives of the Validation Workshop were to **review, discuss and validate the preliminary ELE findings, and identify ways to adapt the NSP based on the lessons identified**. The fruitful discussion on preliminary ELE findings allowed the ELE Team to validate them in collaboration with the NSP Team, and identify valuable actions to transfer lessons from the Technical to the Financial Component, some of which have been captured in the recommendations section (Section 6.2).

The final part of the fieldwork moved the ELE Team into the **Analysis Phase**. Figure 1 illustrates the different steps taken to analyse the data.

Figure 1: Summary of the ELE Analysis Methodology



As a thorough explanation of all the elements of the process described in Figure 1 would require several pages, this report provides below some further explanation only for elements that are crucial for the appropriate understanding of the contents of the ELE Report.

- **Examination of evidence for emerging themes extraction:** The ELE Team updated an Excel analytical tool from a previous ELE that cross-referenced: (i) the ELEQs; (ii) the OECD DAC Criteria; (iii) the “mood” of the evidence (i.e. positive or negative); (iv) emerging themes from the evidence gathered; (v) the name and affiliation of the interviewees (only for ELE Team internal version) or title of the document; (vi) the “type of source” (i.e. NSP Team, NSP Stakeholder, Third Party); (vii) unique reference number for each interview following the type of source; and (viii) the strength of evidence for each evidence emerging theme. The full anonymised Excel spreadsheet has been submitted to the TSU.
- **Evaluating the strength of the evidence:** To assess the strength of the evidence behind the emerging themes extracted from the interview notes or documents, the ELE Team cross-referenced each emerging theme with its sources. Then, the Team went through all the emerging themes again and rated the strength of the evidence behind each of them according to the score card in Table 3. The rating exercise highlighted when emerging themes were based on a single source, several people from a specific type of sources, or came across multiple types of sources. The key limitation of this exercise was the small sample of sources (30 interviews⁷ and 11 documents) compared to the relatively high number of columns in which their evidence was mapped (i.e. two columns, positive and negative connotation, for each ELEQ). This meant that the evidence from each source was widely spread in the ELE evidence map and required keeping the threshold of quantity of sources to classify evidence as “strong” or “very strong” relatively low. To mitigate such limitation, the ELE Team went through a thorough and iterative process of Quality Assurance / Quality Control (QA/QC) that allowed us to identify additional evidence for those emerging themes that were initially classified as less than strong evidence. The final result can be seen in the “Evidence and Answers to the ELE Matrix” in Annex C, which still reports the sources and the evidence strength of the emerging themes used in the answers.

Table 3: Score card for assessing the strength of evidence

Quantity (number of sources reporting the evidence)	Variety (number of types of sources (TS) reporting the evidence)		
	1 TS only	2 TSs	3 TSs
1 interview only	Single source evidence		
2 interviews	Weak evidence	Medium evidence	
3+ interviews	Medium evidence	Strong evidence	Very strong evidence

An additional method that was used to assess the strength of the evidence sustaining the different causal pathways of the NSP ToC was the application of *process tracing* tests. Process tracing is an evaluation method that applies formal tests to the evidence to assess the

⁷ The Kick-Off and Validation Workshops are included among these.

causality between the initial hypotheses and what is actually observed. Annex D illustrates the results of applying the process tracing formal tests to the causal pathways of the NSP ToC.

- **Red-Amber-Green (RAG) rating of contribution stories:** Section 4 of this report uses the evidence and emerging themes discussed above to present the ELE Team's findings in terms of the performance of the NSP against the OECD DAC criteria (relevance, effectiveness, efficiency, impact and sustainability) and (under the effectiveness criteria) its performance against the ToC intermediate outcomes. Performance is summarised for each DAC criterion and /or ToC intermediate outcome, in the form of a RAG score, as follows: Green – good / very good performance; Amber - some progress but problems also identified; Red - Serious deficiencies in performance.

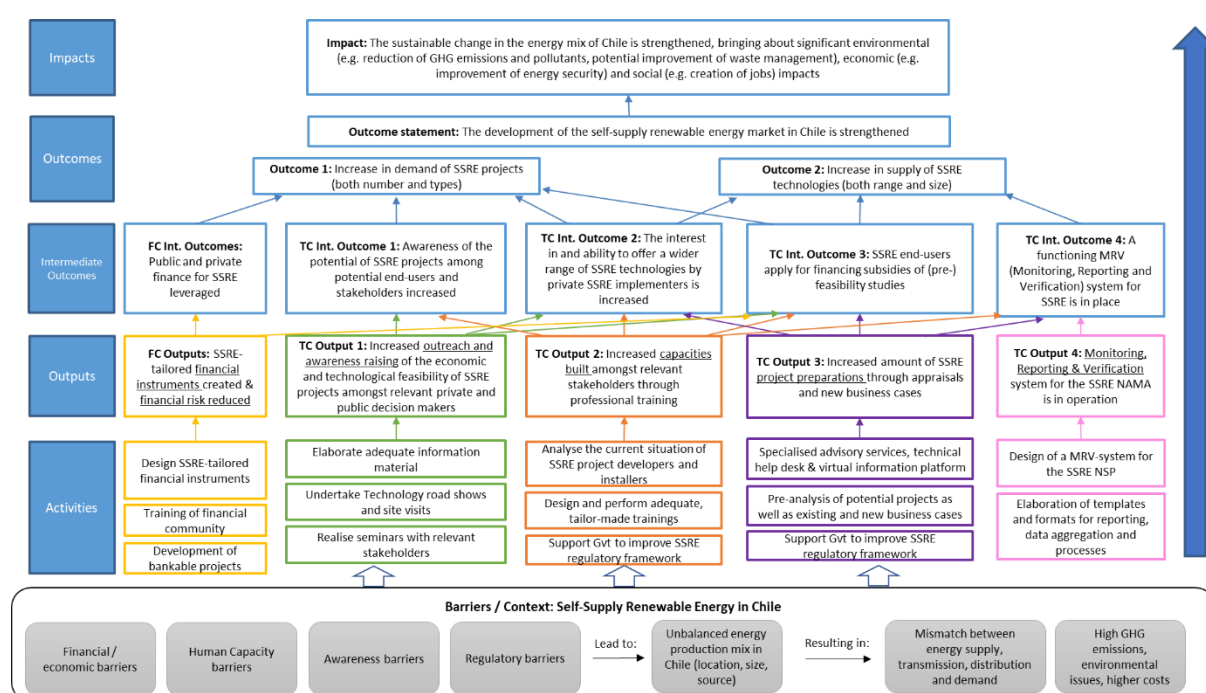
The final ELE phase is the Reporting and Presentation Phase. During this phase, the ELE Team compiled this report, which has undergone a thorough peer-review internal to the NAMA Facility and the NSP. If requested, the ELE Team will present the ELE findings to: (i) the TSU; (ii) the NAMA Facility Donors; (iii) the NSP Team; and ideally (iv) all the interviewed stakeholders.

Before concluding the methodological section, a few words need to be said about the limitations that the COVID-19 pandemic imposed on the ELE. The main limitation resulting from COVID-19 was the need to conduct the fieldwork in a virtual mode. Although the ELE Team was able to arrange interviews with an appropriate number and variety of stakeholders, the ELE was limited in two key ways. Firstly, the ELE Team was not able to be personally immersed in the NSP's national and local context. To some extent, this fact may have limited the full understanding of the contextual dynamics influencing the NSP, although the participation of an experienced local consultant in the ELE Team has mitigated this issue to a great extent. Secondly, the elimination of the need for physically transferring from an interview's location to another, allowed the scheduling of many back-to-back interviews, which have added stress on the ELE Team that might have influenced its judgement. This challenge was mitigated by recording the interviews, which allowed the team to review key information exchanges again at a later stage when needed, and by the participation of at least two ELE Team members in over 90% of the interviews conducted.

3 NSP Theory of Change⁸

Although the NSP Team mentions the ToC in both their proposal and regular reporting to the TSU of the NAMA Facility, the ELE found that the NSP team had not gone through the process of developing a consistent ToC. To allow an effective theory-based evaluation, the ToC needs to be sufficiently robust and detailed, including having clear *causal pathways* linking the NSP activities, outputs, outcomes and long-term impact. Therefore, during the inception phase, the ELE Team retrospectively developed a ToC diagram (Figure 2, and provided in larger size and with key assumptions in Annex A), which was then validated in collaboration with the NSP Team at the Kick-Off Workshop. Below the ELE Team explains the ToC elements and their original causal assumptions.

Figure 2: Theory of Change of the Chile Self-Supply Renewable Energy NAMA Support Project



Note: FC = Financial Component; TC = Technical Component

The problem

According to the NSP Technical Component's proposal from 2015, although in Chile, installed capacity from large scale renewables had increased consistently in previous years, the installation of SSRE technologies by SMEs was lagging behind.

In response to that, the NSP tries to address four main barriers preventing the uptake of SSRE technologies by Chilean SMEs: (i) **financial and economic barriers** that prevent SSRE end-users to access to preferential financing conditions to pay for SSRE feasibility studies and subsequent project implementation; (ii) **human capacity barriers**, namely that (a) there is an overall lack of SSRE project implementers (i.e. installers and/or companies that can deal with the operation and maintenance of

⁸ Developed by the evaluators based on the NSP proposal and inputs during the ELE kick-off workshop.

SSRE technologies), and (b) those that do exist are concentrated around major cities only; (iii) **awareness barriers** that mean both end-users and implementers are not fully aware of the key options and benefits of different SSRE technologies; and (iv) **policy and regulatory barriers** that substantially pose limits to the economic viability of SSRE projects.

The impact and outcomes of the NSP

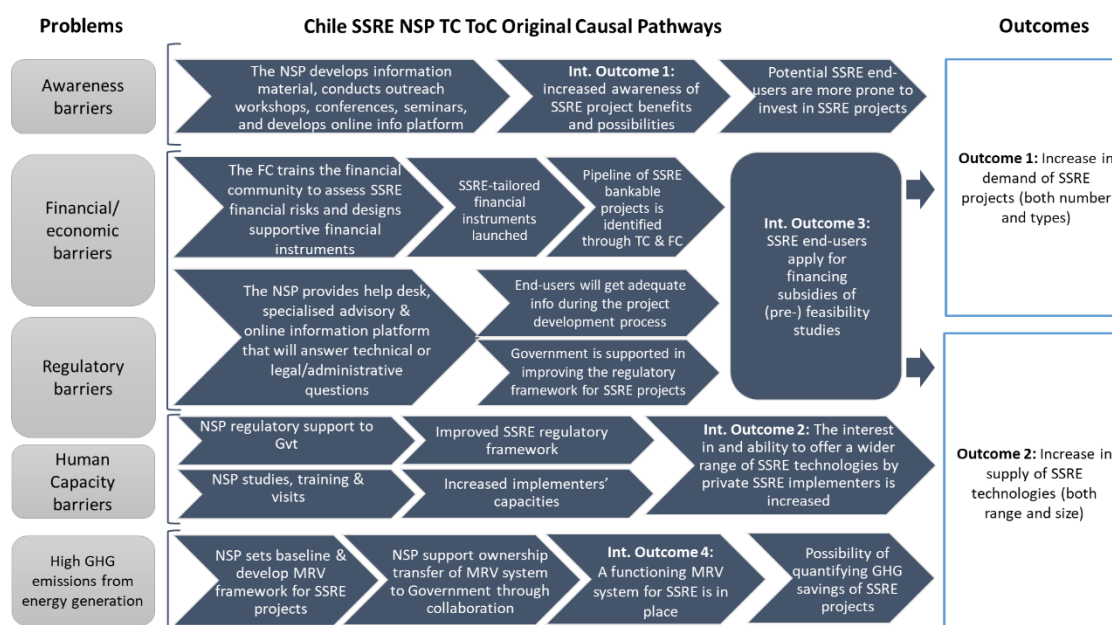
In the NSP documentation reviewed, the NSP Team outlined the overarching goal of the project to be the following: “The development of the self-supply renewable energy market in Chile is strengthened”⁹. The ELE Team however, identified from the NSP proposal an even higher-level goal for the NSP, which was included as impact of the ToC, namely: “**The sustainable change in the energy mix of Chile is strengthened, bringing about significant environmental (e.g. reduction of GHG emissions and pollutants, potential improvement of waste management), economic (e.g. improvement of energy security) and social (e.g. creation of jobs) impacts**”.

The original overarching goal has been included as outcome statement of the NSP’s ToC, and, in order to better define what “*strengthening of the SSRE market*” means, it was split into **two main outcomes**: **1) Increase in demand for SSRE projects (both number and type); 2) Increase in supply of SSRE technologies (both range and size).**

The original causal pathways

In order to progress from the initial problems identified, to the achievement of the outcomes proposed, the NSP ToC foresees 4 causal pathways, which are illustrated in Figure 3 and explained below and referred to in the relevant sub-sections of Section 4.1.

Figure 3: Causal Pathways of the Theory of Change of the Chile SSRE NSP



Note: TC = Technical Component; FC = Financial Component

⁹ NSP Proposal of the Technical Component, section 2.2, p. 5.

The ELE has identified the following causal pathways sustaining each of the four Intermediate Outcomes of the Technical Component:

- **Causal pathway supporting Intermediate Outcome 1:** If the NSP increases the outreach on the economic and technological feasibility of SSRE projects amongst relevant private and public decision makers (Output 1-TC), then the general awareness of the market of SSRE projects' benefits and possibilities will be raised (Intermediate Outcome 1), the SSRE end-users will be more prone to invest in SSRE projects and there will be an increase in the demand for SSRE projects (Outcome 1).
- **Causal pathway supporting Intermediate Outcome 2:** If the NSP builds capacities of relevant stakeholders through professional training, studies, and visits (Output 2-TC) and, at the same time, supports the Government to improve the regulatory framework related to SSRE, then the number of private companies that implement SSRE projects increases (Intermediate Outcome 2), they are assisted by the NSP to perform basic and advanced steps in SSRE project development, and ultimately there will be an increase in the supply of SSRE technologies (Outcome 2).
- **Causal pathway supporting Intermediate Outcome 3:** If the NSP increases the amount of SSRE project preparations through appraisals and new business cases (Output 3-TC) and, at the same time, supports the Government to improve the regulatory framework related to SSRE, and the Financial Component supports the launch of SSRE-tailored financial instruments (Outputs-FC), then SSRE stakeholders apply for financing subsidies for SSRE projects (Intermediate Outcome 3) and there will be an increase in both the demand of SSRE projects (Outcome 1) and the supply of SSRE technologies (Outcome 2).
- **Causal pathway supporting Intermediate Outcome 4:** If the NSP supports the development of a robust and flexible MRV system for SSRE projects (Output 4-TC) and it supports the ownership transfer of MRV system to the Government and the testing of the MRV system on real SSRE projects (Intermediate Outcome 4), then the GHG mitigation and sustainable development co-benefits of the SSRE projects can be measured and observed and the demonstration of the benefits strengthen the SSRE market (Outcome Statement).

4 Key Findings

In this section, the ELE Team presents the main findings of the ELE. These are structured according to the ELE Questions in Table 1¹⁰. At the beginning of each section, a summary of the findings related to the relevant ELEQ is presented. A RAG rating is also provided, based on the contribution analysis of the NSP's performance against the OECD DAC criteria and the project's progress relative to its ToC causal pathways, using the following scale: Good / Very good = Green; Problems = Amber; Serious deficiencies = Red.

4.1 Relevance of the NSP

4.1.1 How the NSP addressed the needs of its target groups

Table 4: Evaluation Question 1

Evaluation Questions	1. To what extent does the NSP address an identified need (by national government, SSRE implementers and end-users)?
Summary	<p>Chile's National Government is committed to the climate and clean energy agendas that the NSP is helping to strengthen and deliver. The NSP has provided technical assistance to complement the efforts of the MoE for advancing public policy for the promotion of SSRE and this has been widely recognised by all stakeholder groups. For renewable energy equipment suppliers and installers, the SSRE segment seems to be very important, covering the majority of their business. Therefore, the activities and products developed by the NSP have been highly relevant to this stakeholder group, as they address the main barriers that need to be overcome for this market to consolidate and become sustainable over time.</p> <p>There is ample evidence that the SSRE market in the past 5 years has been booming in Chile. However, lack of awareness, technical capacity, and access to finance have been widely cited as remaining key gaps for end-users, showing that the NSP has been addressing relevant needs of this market. Since financing is a big barrier for implementers and end-users, the delay of the Financial Component may have made the NSP less relevant to them.</p>

In order to ascertain the relevance of the project, the ELE Team developed and asked a series of questions to test three evidence factors: (i) the extent to which the NSP addresses an identified need of National Government, including its alignment with national agenda; (ii) the extent to which the NSP addresses identified needs of SSRE implementers, i.e. renewable energy equipment suppliers and installers; and (iii) the extent to which the NSP addresses identified needs of SSRE end-users.

The ELE Team found strong and consistent evidence of the NSP's alignment with national priorities and needs. The NSP is strongly aligned with government priorities regarding GHG emission reductions for the energy sector, since increasing participation of renewable energy (RE) is part of the country's sustainable development agenda. Examples include:

¹⁰ In order to maintain a fluid narrative between the achievement of the NSP outcomes and the long-term impact, the findings about ELEQ 4 (Impact) are presented right after those of ELEQ 2 (Effectiveness).

In 2017, the Chilean government launched the new Climate Change National Action Plan (PANCC – Plan de Acción Nacional de Cambio Climático 2017 – 2022), which is part of the Chilean Nationally Determined Contributions (NDC) and where the SSRE NSP is explicitly listed as a contributing project¹¹. In 2018, a new governmental guideline, known as “Ruta Energética” (Energy Roadmap) was released. Its 4th axis addresses “Low emission energy” and has a direct and substantial relevance to the NSP, as it postulates a 400% increase in SSRE projects under 300 kW by 2022. In addition, Chile was the first country in Latin America to submit a revised NDC on 9th April 2020, confirming the goal of carbon neutrality by 2050 and more ambitious (unconditional) targets than the original version. Moreover, in April 2020 the Ministry of Energy (MoE) and the Sustainable Energy Agency (Agencia de Sostenibilidad Energética - ASE) launched the program: “Put Energy into your SME” (Ponle Energía a tu Pyme), which further confirms that the promotion of SSRE as a public policy priority.

The MoE has been closely involved in the design and implementation of the NSP Technical and Financial Components, through leading the Directive Committee where GIZ, CORFO and KfW are also represented. In relation to the Technical Component in particular, the Division of Sustainable Energy (DSE) leads the coordination through periodic meetings of the Steering Committee. **The MoE has permanently requested support from the GIZ’s NSP Team in terms of technical assistance to complement their own efforts for advancing public policy for the promotion of SSRE.** It should be noted that a couple of stakeholders disputed this opinion and mentioned that it was less clear how involved the MoE has been in the strategic planning and steering of the Technical Component. For instance, one source felt the project is not very high in the government’s political priorities, beyond the MoE. Moreover, once the Technical Component did not obtain an extension beyond 2020, a drop in the involvement of GIZ by the NSP’s government counterpart in the discussions relevant to the planning and inception of the Financial Component was observed.

The interviews with implementers showed that the SSRE segment (i.e. commercial in type and up to 300 kW of capacity) seems to be very important for them, covering the majority of their business in terms of demand for services and products. Therefore, **the activities and products developed by the NSP have been highly relevant to this stakeholder group**, as they address the main barriers that need to be overcome for this market to consolidate and become sustainable over time. These include improving the technical capacities of implementers, users and financial institutions, educating banks and end users (who are not always aware of the savings and other benefits from implementing SSRE projects), and supporting the creation of a project pipeline. From the perspective of SSRE implementers, the NSP also provided valuable technical support to the discussions around policy reforms that have, in turn, been beneficial for the expansion of their markets (see Section).4.2.2

The ELE found evidence around the fact that the NSP's initial focus on solar photovoltaic (PV) electricity generation diverted attention away from other segments, such as thermal applications, that started to show high potential as the NSP advanced. For instance, heat pumps and biomass have appeared as very promising markets for SSRE, in addition to Solar PV, where most of current SSRE installations are concentrated. Nevertheless, it was consistently mentioned that **the Technical Component recognised these opportunities timely and had the flexibility to adjust its activities to cover many of the non-PV SSRE technologies with good results.** Complementarily, the Technical

¹¹ https://mma.gob.cl/wp-content/uploads/2017/07/plan_nacional_climatico_2017_2.pdf

Component team permanently evaluated different market niches for SSRE to adjust the focus of the activities to the sectors where better opportunities were found. For instance, in 2017 a baseline study was carried out to identify the needs of the market and prioritise sectors for the interventions of the Technical Component. Some sectors (e.g. the wine industry) were not prioritised initially, but later, when they proved to have high potential for SSRE projects, the NSP supported them. From the information collected, it appears that the main sectors targeted by the NSP were SMEs in agriculture and livestock (including the wine, meat and agri-processing sectors) and tourism. Moreover, every year there has been a planning exercise involving DSE and GIZ to agree on the annual priorities for the Technical Component based on their policy needs.

In terms of the relevance of the NSP to end-users, there is ample evidence that the SSRE market in the past 5 years has been booming in Chile. The reform to the net billing law, to which the NSP contributed with technical analysis, has provided a huge boost to this market in recent years. However, **a lack of awareness of products and benefits, technical capacity, and access to finance have been widely cited as the remaining key gaps for end-users, which shows that the NSP is well aligned to addressing relevant needs of this stakeholder group.**

Financing is a big barrier for end-users; therefore, the delay of the Financial Component made the NSP less relevant to them. There is some evidence from two interviews that there has been some reputational impact on the NSP, since the Financial Component was announced, but postponed several times. It has also been mentioned that, perhaps, the NSP team could have adjusted the plan to link implementers and end-users with other financial support initiatives, if they had known earlier that the Financial Component was not going to come in place in parallel to the Technical Component (see Section 4.2.3 for more details).

In conclusion, based on the evidence presented above, the ELE Team considers the performance of the NSP in terms of relevance to the needs of its target groups as appropriate, and consequently marked this evaluation criterion as “green”.

4.1.2 How external factors impacted the NSP’s relevance

The ELE can confirm that the national policy agenda has increased the relevance of the NSP because the promotion of renewable energies of all scales is one of the main pillars of the country’s sustainable development agenda. SSRE projects are seen as key contributors to decarbonising the energy mix in Chile. Also, the clear national commitment to addressing climate change, in particular from the energy sector, gives higher certainty to the private sector, including possible SME investors in SSRE projects.

Growth in RE generation, particularly large scale, coupled with a decrease in PV prices and an increase in their quality and efficiency, has resulted in a growing interest in SSRE, lowering the perception of risks associated with switching to RE technologies. Banks observe that their clients are more interested in incorporating RE in their operations as declining costs and improved efficiencies result in greater economic savings, a key incentive for an investment. In addition, growing environmental and climate awareness amongst SME management is now also an influential driver when defining investment priorities. Besides to the more mature commercial sector, it was noted that the residential market is at the beginning of its development, meaning that a further major expansion

of the SSRE market is foreseen. Despite all these positive developments in the SSRE segment, **there is still an evident need for technical and financial support to keep strengthening the market and to increase the chances of its long-term sustainability.**

The development of the Energy Service Company (ESCO) model¹² has been a big incentive and driver for the SSRE market. Unfortunately, from the ELE interviews, evidence was found that companies without much experience have implemented projects that have failed in delivering expected results. These bad experiences have to some extent damaged the image of SSRE in the eyes of some end-users, and therefore have affected the credibility of the benefits of these new technologies. In this context, **interviewees highlighted the importance of the Technical Component awareness-raising work on the benefits and advancement of SSRE technologies.**

From the ELE, interviews strongly confirm that SSRE may be a central solution for a green economic recovery after COVID-19 and the widespread social unrest occurring in Chile since the end of 2019, and therefore the existence of the NSP is particularly relevant under these circumstances. The economy is slowly recovering, and there are expectations that companies will look into new sustainability projects again soon. Indeed, contrary to what some would expect, the number of applications to SSRE funding and installation of SSRE projects have remained high throughout 2020, and today, there are many end-users who want to install even large size RE.

4.2 Achievement of the NSP Outcomes

Table 5: Evaluation Question 2

Evaluation Question	2. To what extent has the implementation of the NSP been achieving intended outcomes?
Summary	<p>Intermediate Outcome 1: The ELE found that the Technical Component has worked extensively to raise awareness of the different SSRE options and benefits, and that awareness levels in key national stakeholders have increased as direct contribution of the Technical Component. Interviewed stakeholders consistently reported high levels of appreciation from users of both awareness events and material.</p> <p>Intermediate Outcome 2: The Technical Component was prolific in developing support tools and technical studies, as well as delivering training, good practice site visits and international study tours to Europe. In general, the ELE interviews consistently confirmed the tools, assistance and capacity building provided were helpful and that the resulting knowledge gained is being used by SSRE project implementers. The ELE also evidenced good flexibility of the NSP in identifying the need for policy and regulatory framework support, and to go ahead requesting an amendment to the project scope to allocate specific activities to it. However, despite the support provided by the NSP to the government, there is some evidence that the regulatory framework still needs to be improved (see Section 4.2.2 for details). In conclusion, the ELE generally confirm that the Technical Component has directly</p>

¹² An ESCO is a company that offers energy services – in this case renewable energy – to end-users at a direct low or no cost to them. According to this business model, the end-users benefit from receiving low-cost or often free energy from the renewable energy technology installed on their premises by the ESCO, while the latter will own the equipment and receive payments from selling the excess energy generated by the RE project to the grid. ESCOs' RE services are often coupled with energy efficiency assistance to the end-users, so that their energy needs will be reduced, creating a win-win situation for both parties.

Evaluation Question	2. To what extent has the implementation of the NSP been achieving intended outcomes?
	<p>contributed to building the capacity of SSRE implementers and increasing their interest in and ability to offer a wider range of SSRE technologies.</p> <p>Intermediate Outcome 3: Through technical assistance, the NSP directly contributed to improve the national SSRE policy and regulatory framework, helped SSRE end-users better assess the key technical requirements and economic costs and benefits of their SSRE opportunities. It also identified a list of potential projects for the Financial Component. Nevertheless, Intermediate Outcome 3 has not been achieved, substantially because of the absence of the Financial Component. In hindsight, not having looked for a “plan B” to substitute the Financial Component can be seen as a missed opportunity for the NSP.</p> <p>Intermediate Outcome 4: The ELE found the MoE has been closely involved by GIZ in the development of the MRV system for SSRE projects. The MoE has been very satisfied with quality and robustness of the SSRE MRV system; in fact, it requested support to develop and test a second MRV system for large-scale RE, which can be considered an additional outcome of the project. In terms of supporting the MRV system’s functioning, the Technical Component appears to have put in place an appropriate framework for the MoE to own and operate the RE MRV systems. In addition, by applying the MRV systems on RE projects in Chile, the NSP contributed to improving the transparency of the RE sector, another positive and unexpected outcome. Finally, the NSP MRV system appears to be generally in line with the national MRV system led by the Ministry of Environment.</p> <p>Financial Component strategy: The NSP’s Financial Component is due to start in 2021 and will provide four types of services to the SSRE market in Chile. The ELE identified evidence on the key risks and opportunities for the Financial Component, as well as on the appropriateness of its strategy. From the interviews, the Financial Component strategy appears to be adequate to address the barriers to access finance for SSRE. Some of the success factors will be: (i) continuation of technical backstopping; (ii) appropriateness of the content and delivery of the capacity building to FIs; (iii) appropriateness of the financing mechanisms to the SSRE market; (iv) coordination and complementarity of the NSP activities and the initiatives on the market; (v) internalisation of externalities; and (vi) finding its own market niche and added value to the market.</p>

One of the core parts of the ELE was to assess to what extent the NSP, in this case its Technical Component, has been achieving its intended outcomes, and to identify the key barriers or enablers that impacted (positively or negatively) the translation of the Technical Component outputs into outcomes. Below, the ELE Team provides a narrative review of the evidence the ELE found relative to the achievement of the NSP’s intermediate outcomes, namely: (i) awareness of the potential of SSRE projects among potential end-users and stakeholders is increased; (ii) the interest in and ability to offer a wider range of SSRE technologies by private SSRE implementers is increased; (iii) SSRE end-users apply for financing subsidies of (pre-) feasibility studies; and (iv) a functioning MRV system for SSRE is in place. In addition, as another goal of the ELE is to identify transferrable lessons for the Financial Component, this section also reports the ELE findings on the key risks and opportunities for the Financial Component strategy. For details about the NSP’s achievement against its logical framework targets, please see Annex D.

4.2.1 Intermediate Outcome 1: Awareness of the potential of SSRE projects among end-user stakeholders increased

Part of the *contribution story* of the NSP ToC is the overcoming of awareness gaps about the different SSRE technology options available to address SMEs' energy needs, and their multiple benefits compared to centralised solutions for heat and power. This is to be done through the development and delivery of information materials, outreach workshops, conferences, seminars, and an online information platform to, ultimately, increase the demand for SSRE projects, in terms of both number and types of technology (ToC Outcome 1).

The ELE found that the Technical Component has worked extensively to raise awareness on the different SSRE options and benefits, by producing a plethora of information materials¹³ and disseminating them to the market through webinars, workshops, events, trainings, and online publications. (e.g. best practice examples, guidelines for SSRE PV systems and biomass boilers, PV, biomass and heat pump price indexes, a study on normative requirements for energy storage, a heat pump market analysis, several study tours to Europe (Germany, France), videos, flyers, an infographic of SSRE financing instruments, and good-practice site-visits).

Although the Technical Component was able to have a “substantial role” (i.e. as an organiser or keynote speaker) in awareness raising events to which participated 748 people up to the end of 2019, some of the interviewed stakeholders had the perception that some important actors were not sufficiently targeted by awareness raising activities (e.g. ACERA¹⁴, ACESOL¹⁵, ANESCO¹⁶, CAMCHAL¹⁷), even though some of their associates have been. However, the NSP team has provided evidence that some awareness raising interactions with these stakeholders have actually happened. Moreover, there is evidence from the ELE interviews and from a survey conducted by the NSP on a yearly basis among the project's target audience, that **awareness levels in key national stakeholders have increased as a direct contribution of the Technical Component.**

Interviewed stakeholders consistently reported high appreciation from users of both awareness events and materials. In particular, the annual solar PV price indexes developed by the NSP through surveying key market players appears to have been known and used by a number of interviewees. On that though, the ELE received contrasting views on the accuracy of the prices on the PV price indexes: someone said they are lower than the actual ones, while others said they are actually higher than those on the market. The ELE is not in a position to establish where the truth lies, but this is something the MoE reported to be aware of and they are already thinking of how to address the issue in future editions. Finally, when the ELE team asked if interviewees had seen the informative online platform on SSRE developed by the NSP (autoconsumo.minenergia.cl), few times they were told that they had not. This could highlight the need for its improved publicization, although the specific sample is too small to make any general inference.

¹³ For an indicative list of NSP's technical and informational material reviewed by the ELE, see Annex F. Up to the end of 2019, the NSP has reported publishing 14 public relation material on SSRE (see output indicator A2 in Annex D).

¹⁴ Chilean Association of Renewable Energies and Storage.

¹⁵ Chilean Association of Solar Energy.

¹⁶ National Association of Energy Efficiency Enterprises (and ESCOs).

¹⁷ German-Chilean Chamber of Commerce and Industry.

In conclusion, as there is a consistent evidence that the Intermediate Outcome 1 has been achieved by the Technical Component, the ELE Team has rated the NSP's effectiveness over this outcome as "green".

4.2.2 Intermediate Outcome 2: The number of private companies that implement SSRE projects is increased

There are two parallel *causal pathways* in relation to the Intermediate Outcome 2. The first one would see the Technical Component of the NSP providing targeted technical studies, professional training courses and good-practise site-visits to established or potential SSRE implementers (including ESCOs). The second one would include the provision by the Technical Component of policy and regulatory support to the Government of Chile (GoC) to improve the framework the SSRE market players are in. Both causal pathways would contribute to increasing the number of private companies, proposing and installing the wide range of SSRE technologies (ToC Intermediate Outcome 2), which would be supported by the NSP in case of need during sponsored SSRE projects. Ultimately, this would directly strengthen the supply of SSRE projects (ToC Outcome 2) and indirectly demand for them (ToC Outcome 1).

The Technical Component was prolific in developing support tools and technical studies, including SSRE market price index updates – which in the cases of biomass and heat pumps were the first of their kinds in Chile – and technical studies, manuals, guidelines, videos and factsheets on a variety of SSRE technologies. **It also delivered training** to 424 of both end-users and project implementers, **and good practice site visits and international study tours to Europe** to a total of 69 stakeholders¹⁸. **In general, the ELE interviews consistently confirmed the tools, assistance and capacity building provided were helpful and their knowledge is being used by project implementers.**

The ELE also evidenced good flexibility of the NSP in identifying the need for policy and regulatory framework support and then requesting an amendment to the project scope to be able to allocate specific activities to it. Some share of the merit also goes to the NAMA Facility for allowing the change in scope of the project. Had they not done that, an important barrier to the SSRE, which was identified in the NSP Proposal in 2014, would have been left unaddressed and outside of the sphere of influence of the NSP. The main example of the effectiveness of the NSP in fostering a more conducive policy framework for SSRE is the reform to the Net Billing law, which was reported by many to have provided a huge push to this market in recent years.

However, despite the support provided by the NSP to the government, there is some evidence that the regulatory framework still needs to be improved to further enable the strengthening of the SSRE market. For example, SSRE implementers still see a need for additional regulatory improvements to properly harmonise the thresholds for installed capacities set by the Net Billing law (0-300 kW), and the one for Small Means of Distributed Generation (PMGD - Pequeños Medios de Generación Distribuida). Moreover, under the current regulatory framework, distribution companies are mandated to support the connection of SSRE projects, but they appear to have no incentives to carry

¹⁸ Both figures are self-reported and refer to cumulative achievements by the end of 2019.

on these activities in a timely manner, as they do not receive any tariff incentives or remuneration for doing so.

In conclusion, the ELE Team has assigned a “green” rating to the Technical Component’s effectiveness in achieving the Intermediate Outcome 2, as the ELE generally confirms that it has directly contributed to building the capacity of SSRE implementers and increasing their interest in and ability to offer a wider range of SSRE technologies.

4.2.3 Intermediate Outcome 3: SSRE end-users apply for financing subsidies of (pre-) feasibility studies

As for Intermediate Outcome 2, the NSP ToC foresees three parallel *causal pathways* pertaining to Intermediate Outcome 3, two of which are under the direct influence of the Technical Component, while the third one is substantially defined by the Financial Component. The first pathway sees the NSP supporting the Government to improve the policy and regulatory framework through technical assistance. The second pathway requires the NSP to provide specialised technical advice to SSRE end-users to assist them in better assessing the key technical requirements and economic costs and benefits. The third one, co-owned by the two NSP components but primarily under the Financial Component responsibility, implies the development of an initial pipeline of SSRE projects by the Technical Component to be confirmed and expanded by the support of the Financial Component. The latter would then assist the projects in accessing adequate financial mechanisms that would have been shaped by the Financial Component itself. According to the NSP ToC, the combination of these causal pathways would result in an increased number of SSRE end-users applying for finance (ToC Intermediate Outcome 3), which would result in a strengthened demand for SSRE projects, both in terms of number and types (ToC Outcome 1).

The ELE found the Technical Component directly contributed to the achievement of all the intermediate steps under its responsibility in the causal chain illustrated above. Indeed, the Technical Component delivered helpdesk assistance to over 220 inquiries, the preparation of an indicative pipeline of SSRE projects, and, going beyond its intended outputs, a number of SSRE project appraisal studies (e.g. 8 pre-feasibility studies conducted in support to the UNIDO project “Biogas development in the dairy industry”). In addition, as described in Section 4.2.2, the Technical Component effectively supported the Government in addressing key policy and regulatory barriers to the growth of the SSRE market.

Nevertheless, Intermediate Outcome 3 has not been achieved, substantially because of the absence of the Financial Component. As no financial mechanisms were devised to support the identified SSRE end-users, no financial support applications had gone through so far, or as an interviewed stakeholder put it: “because of the lack of the Financial Component, the Technical Component could not seal the deal with the SSRE projects”. Indeed, the ELE could not at this point establish any direct causal relationship between the increased number of SSRE projects in the country and the NSP implementation.

An example showing the impacts of the Financial Component’s delays on the Technical Component, and the NSP as a whole, is the missed financial support to a biogas project supported by the United Nations Industrial Development Organization (UNIDO). When the Technical Component initially

contacted the UNIDO biogas project team, they showed high interest in the Financial Component support, for instance to provide the initial capital for their supported SSRE projects. Unfortunately, when the UNIDO project ended in August 2019, the Financial Component had still not materialised. This has not just represented a missed opportunity for the NSP to support SSRE projects in an underdeveloped market niche such as biogas, but it likely cost the NSP a loss of reputation within the market to a certain extent, which might make getting those end-users back potentially more problematic.

Looking at how the Technical Component itself has operated, there are two main critiques the ELE has brought to surface. The first one is that there is evidence from the interviews that the planned Financial Component's instruments were not widely publicised by the Technical Component. This seemed to be true for a number of interviewed stakeholders, including what the ELE defined "NSP Stakeholders" (people who have actively participated in one or more NSP activities). Although the decision to refrain from communicating widely about the NSP's financial support is understandable given the context of a lack of approval for the Financial Component and the need to manage expectations of stakeholders, because of this lack of activity more efforts will be required by the Financial Component to raise awareness across the market about its planned instruments.

The second critique is that it seems the Technical Component has not sufficiently looked at, and therefore promoted, alternative sources of financial support for the NSP beneficiaries. In fairness, there is some evidence suggesting alternative financial sources were considered. For example, in the NSP Annual Reports since 2017, it is mentioned that the Technical Component collaborated with the German-Chilean Chamber of Commerce and Industry (CAMCHAL), which, as part of the (then) BMUB funded IKI Project "Smart Energy Concepts", managed an open call for proposal for the co-financing of pre-feasibility studies for energy efficiency and renewable energy projects in the Chilean agriculture sector. Nevertheless, at the ELE Validation Workshop, GIZ team itself admitted that the main reasons for not having been able to push effectively for alternative financial mechanisms were: (i) the multiple postponements of the start of the Financial Component, which was always seen by the Technical Component as coming soon; (ii) a lack of actual financial incentives on the market at the time, as most of the current schemes have only been launched during the past months; and finally (iii) the presence of clear instructions from the TSU that the NSP was to support only projects funded by the Financial Component.

In conclusion, the ELE confirms the high-quality (see Section 4.4) and useful technical support provided by the Technical Component to both the SSRE end-users and the government. However, in hindsight, not having looked for a "plan B" to the Financial Component can be seen as a missed opportunity for the NSP, because the support provided to SMEs has been incomplete, and it could have increased its effectiveness. Therefore, based on the above, the ELE Team assigns to the effectiveness of the Technical Component in achieving its Intermediate Outcome 3 the RAG rate of "amber".

4.2.4 Intermediate Outcome 4: A functioning MRV system for SSRE is in place

One of the core elements in the NSP ToC is the demonstration of the GHG mitigation potential of SSRE, which would be made possible by the development of an MRV system that could appropriately measure and evaluate emissions savings. Ownership of the MRV system would then

be transferred by the NSP to the Government through collaboration and its testing on real SSRE projects in Chile (ToC Intermediate Outcome 4). This would allow for the quantification of the GHG savings of the NSP-supported projects, which would ultimately strengthen the SSRE market as a whole (ToC Outcomes 1 and 2).

The ELE found the MoE has been closely involved by GIZ in the development of the MRV system for SSRE projects. The MoE has been very satisfied with quality and robustness of the SSRE MRV system; indeed, it has been so satisfied with the final product developed by the Technical Component and its effectiveness that it asked GIZ (in collaboration with a consultant) to support them in the development of a **second MRV system for large-scale RE**. This went beyond the original NSP ToC and can be considered as an **additional outcome of the project**. **Furthermore, the SSRE MRV system itself went far beyond its original scope**, as rather than being applied only to the NSP-financed SSRE projects, it was developed to cover and was tested on thousands¹⁹ of SSRE projects in Chile.

Perhaps, a weakness of the NSP-developed MRV system is shown by some reporting that, **despite being useful and comprehensive, the Excel-based MRV tool is rather complex and it could benefit from being made more user-friendly**. Unfortunately, the Technical Component's proposal to add extra budget to the NSP to develop an online-based MRV interface was not approved. However, to underscore the importance of the Technical Component's work, it is to be considered that, before the NSP, there was no MRV of RE NAMAs in Chile at all. Therefore, improvements in the user interface can reasonably come at a later stage.

In terms of supporting the MRV system's functioning, the Technical Component appears to have put in place an appropriate framework for the MoE to own and operate the RE MRV systems. Positively, the Ministry and GIZ have applied the MRV systems on data from a large number of current and past RE projects. This made the MRV platform a key market monitoring product that was created by the NSP as the MoE was able to see the GHG savings from the different RE segments over time. Unfortunately, despite the fact the tool proved to be working, since there have not been SSRE installations directly assisted by the Financial Component, the MRV system could not be used to measure the GHG savings of NSP-supported projects yet, which, to the ELE Team, appears to be a missed opportunity. Nevertheless, as reported by the NSP team, there are concrete plans to apply the MRV tool to assess the GHG reduction potential of project proposals to be funded under the sub-components 1 and 2 of the Financial Component²⁰.

However, **by applying the MRV systems on RE projects in Chile, the NSP contributed to improve the transparency of the RE sector**, as the data are now available on the Government's social media channels. A **positive and unexpected outcome** of having the MRV tool and comparable GHG emissions data from thousands of SSRE project in Chile publicly available is the reporting that the MRV tool is now used more broadly than by the MoE, including, for example, by SMEs in the agriculture sector when assessing the GHG benefits for taking financing decisions on potential RE investments.

Finally, the NSP MRV system appears to be generally in line with the planned national MRV system led by the Ministry of Environment (MMA). Nonetheless, a challenge in operating the RE MRV

¹⁹ 3,435 as of 12/2019 (https://energia.gob.cl/sites/default/files/sistema_mrv_eng.pdf).

²⁰ See a description of the sub-components of the Financial Component in Section 4.2.5.

systems by the MoE will be the coordination with the MMA, including at the indicator level (i.e. by harmonising indicators of various MRV levels to avoid duplication of efforts)²¹. In fact, two interviewees felt that the MMA could have been involved to a greater extent in the development of the RE MRV systems, something that the NSP Team disputes. The MoE and MMA are still discussing their roles and responsibilities in the national MRV system for RE NAMAs. In fairness, the whole national MRV governance is still under definition and the MMA is discussing with 15 line ministries about their roles. To explain, Chile has a good GHG inventory system, but it still does not have a functioning national MRV system for mitigation actions (NAMAs), although guidelines for its set up are present.

As the evidence presented above overall confirms the effectiveness of the Technical Component in achieving its Intermediate Outcome 4, the ELE Team assign it the RAG rate of “green”.

4.2.5 Effectiveness of the Financial Component strategy

The NSP’s Financial Component is due to start in 2021 and will provide four types of services to the SSRE market in Chile: (i) grants for feasibility studies of SSRE projects; (ii) small grants to co-fund SSRE projects, particularly those in niche market segments; (iii) capacity building to Financial Institutions (FIs) to support them in the development of appropriate financial mechanisms; (iv) a guarantee fund to mobilise loan financing for SSRE projects. The first two sub-components will be led by the MoE, while the second two will be led by CORFO. KfW is the Delivery Partner, in a similar manner to which GIZ was for the Technical Component.

Although the ELE focused on identifying evidence about the results of the Technical Component, the interviews and workshops also surfaced **evidence on the key risks and opportunities for the Financial Component, as well as on the appropriateness of its strategy**. These are reported below.

First of all, in terms of relevance of the Financial Component, despite the public SSRE incentives that were launched on the market in recent months, **there seems still to be a clear need from SMEs to access finance to develop SSRE projects**.

Furthermore, from the interviews’ evidence, the Financial Component strategy appears to be adequate to address the barriers to access finance for SSRE, although it is too early to forecast how effective the component will be to deliver its intended outcomes. The ELE has identified some critical success factors that the Financial Component will need to consider:

- **The continuation of technical backstopping to the Financial Component, to build a strong pipeline of bankable projects and take care of their technical feasibility assessment.** Chile’s Sustainable Energy Agency (ASE) was mentioned by many as the natural candidate to continue the technical support to the NSP. For instance, ASE has a technical validation platform for RE projects that offers support to BancoEstado (a Chilean public bank) for now, but which could be made available to other banks too. Evidence of the need for technical support comes directly from examples from the financial sector. For instance, in the process for accessing

²¹ This is a common challenge when devising sectoral MRV systems, and could be considered a lesson cross-cutting all NSPs.

funding from “Crédito Verde” (CORFO), commercial banks are responsible for obtaining technical information directly from their clients. However, according to sources from commercial banking, this has been an important barrier for banks to offer the scheme so far. Therefore, there appears to be the need for CORFO to develop alternative modalities for technical validation, so that it does not fall on the private banks, which do not have the appropriate technical capacity. While the need to add technical assistance to the Financial Component is clear, an important risk to get it is that, currently, **ASE does not seem to have professionals or a budget specifically set aside to support the NSP**, and it could take a long time before ASE can provide real assistance to the NSP.

- **Appropriateness of the content and delivery of the capacity building to FIs will be crucial to the success of the Financial Component**, as the banking sector is currently lacking the adequate capacity and it is treating SSRE projects as any other commodity, whereas the market requires tailored mechanisms (see next point).
- **Appropriateness of the financing mechanisms for the SSRE market**, both the direct ones provided by the Financial Component and the ones developed thanks to the guarantee fund. Some of the important features ELE stakeholders said they would want to see are simplicity of the access process, low interest rates, and long-term repayment schemes. Although these elements are broadly applicable to most financial instruments, they have been mentioned by ELE interviews multiple times and it is important for the Financial Component to bear them in mind as key market requirements. One interviewee also suggested the inclusion of project assessment criteria on environmental, social and financial viability, together with technical feasibility.
- **Coordination and complementarity of the NSP activities and the initiatives on the market**, including those from CORFO and MoE, and from other key stakeholders (e.g. by BancoEstado, ASE, the National Irrigation Commission (CNR), and CAMCHAL). The Technical Component has already coordinated, to a certain extent, with some of these initiatives (e.g. BancoEstado, CNR, ASE, CAMCHAL, INDAP), and it will be important for the Financial Component to learn from that experience. The NSP’s coordination efforts appear potentially challenging because, currently, the different parallel RE-supporting initiatives do not seem to be part of a single coordinated effort, for instance by the MoE.
- **Internalisation of externalities, i.e. making sure that the Financial Component is flexible enough to adapt its strategy according to the changing context** (e.g. due to COVID-19, civil unrest, electricity prices fluctuations, etc.). This point will be re-visited in the next section.
- **Finding a market niche that allows NSP to add value to the market**, for example by supporting thermal applications of SSREs, rather than PV projects. This seems to be a lesson coming from the experience of the Technical Component as well. The ELE heard that green hydrogen could be included in the NSP scope. One respondent strongly cautioned the NSP in doing so, explaining that hydrogen projects need larger scales and, since the market is still in its infancy, would require a big effort to set up, which could easily cause the NSP to lose its focus and effectiveness. However, the NSP team pointed out that hydrogen can be effective for small and medium SSRE projects to help to expand the use of onsite RE, particularly by

providing additional electricity generation in those cases where the demand profile does not match the RE supply. In addition, the process could also work in reverse, by using excess of RE electricity to generate hydrogen for replacing the use of fossil fuels, for example to power forklifts or similar.

Having CORFO on the Financial Component team can add value to the NSP, because it will be able to capitalise from its prior experience of operating financial mechanisms for SMEs. For example, CORFO has been providing financial guarantee to BancoEstado, which is one of the likely partners for the NSP's Financial Component. Indeed, the ELE was reported that, from a bank's point of view, guarantee funds are helpful because their investment risk is reduced, therefore they can provide more loans than without the guarantee.

Other suggestions received indicated that in order to ensure alignment with the SSRE market needs, the Financial Component has to: (i) provide specific financial instruments to **facilitate the uptake of the ESCO model**, for example by applying financial guarantees to the economic savings resulting from the model. As ESCOs basically sell "savings", if those can be guaranteed for the client, that could be more attractive for their business model. (ii) **Connect the SSRE loans with property mortgages** (e.g., like the PACE scheme in the USA²²) could be a good model, which has not been widely implemented in Latin America yet. (iii) **For small and medium projects, there may be less of a need for financing pre-feasibility studies by the NSP**, particularly when technology providers act as intermediaries and develop the technical and economic assessment within their services. (iv) Address a possible issue for the long-term sustainability of SSRE projects concerning the **maintenance of projects in rural areas**. For example, although CNR produced a list of technicians who can conduct the maintenance of the SSRE projects²³, it was found that those technicians can be very far from rural SMEs and it could be a problem to get timely maintenance services (especially now in times of COVID-19). Particularly in the northern part of Chile, there seems to be very few installers of solar irrigation projects, for example.

One concern raised was a reported drop in the involvement of GIZ by the MoE in the discussions about the Financial Component's planning, once the Technical Component did not get an extension to continue beyond 2020. This could be because the MoE envisioned that GIZ was anyway not going to be around for the Financial Component's implementation. For example, it seems that GIZ was not informed that the MoE was launching an incentive for residential SSRE, before that was done. **Needless to say, involving GIZ in a proper handover process will be crucial** to build on the NSP's successes and avoid additional missed opportunities caused by the lack of a temporal overlap between the components.

Finally, in terms of the Financial Component's governance, the ELE highlighted that there could be some potential coordination challenges. For instance, the ELE was told that while the MoE wants to advance quickly to provide the NSP subsidies at the beginning of 2021, CORFO might not be able to proceed so fast (at least not with its sub-components). So, there could be two different and conflicting expectations concerning the Financial Components implementation timeframe. The ELE Team would like to emphasise the importance that the 4 sub-components of the Financial Component operate at

²² <https://www.energy.gov/eere/slsc/property-assessed-clean-energy-programs>.

²³ <https://www.cnr.gob.cl/temas-transversales/energias-renovables-en-riego/riego-fotovoltaico/>.

the same time and in synergy with each other, or else their effectiveness and efficiency may be diminished substantially.

In conclusion, even though the general strategy of the Financial Component appears to be relevant and, on paper, potentially effective to address the key identified economic and financial barriers to the SSRE market in Chile, the presence of clear challenges to its implementation made the ELE Team assign it the RAG rate of “amber”.

4.2.6 How external factors impacted the NSP’s ability to achieve its outcomes

One of the objectives of the ELE was to understand how and to what extent external factors had impacted, both positively and negatively, the ability of the NSP to achieve its outcomes. Some of these factors have been discussed in Section 4.1.2, but in that case they were analysed to see how they had influenced the relevance of the NSP. In this section, the focus is on the reported impact on the NSP’s ability to implement its tasks effectively.

In terms of **external factors creating a favourable context for the NSP, the presence of other SSRE-related projects and initiatives in Chile** was definitely one of them. For example, the NSP participated in the initiative “Gestiona Energía”, which initially was focused on energy efficiency, but which the NSP was able to steer towards SSRE as well. Also, the public bank BancoEstado introduced during 2017 a financing line for small renewable energy and energy efficiency projects, and in April 2020, the MoE and ASE launched the “Ponle Energía a tu Pyme” (Put Energy into your SME) programme to co-finance energy efficiency and SSRE projects in SMEs. In addition, the Technical Component has explored synergies with numerous other donor-funded projects in Chile, such as “Biogas development in the milk industry”, “Promotion and Development of Local Solar Technologies in Chile”, “Smart Energy Concepts”, “Program for the Direct Uses of Geothermal Energy”, and “Partnership for Market Readiness – Chile”. Moreover, at the international level, initiatives such as the “green finance initiative” (e.g. green bonds) and the global guarantee fund of the UK Government can also be complementary to the NSP Financial Component.

Then, there are some positive “externalities” to which, however, the NSP has to some extent contributed with its technical studies, capacity building, and technical assistance. In this category can be found the **increase of number of SSRE implementers on the market and the Net Billing Law amendment** to extend the possibility of selling the excess of generated electricity to the grid by SSRE from 100 kW to 300 kW of installed capacity.

On the other hand, some external factors undoubtedly had a negative impact on the Technical Component’s effectiveness. Staff turnover and institutional changes also had an impact on the NSP’s effectiveness, particularly by causing serious delays to the start of the Financial Component, as the Chilean government could not identify in a timely manner the institutional mechanism to channel the NAMA Facility’s funds to implement the Financial Component. Additionally, presidential elections caused some delays to the Technical Component implementation, and the loss of ODA status of Chile made it impossible for the Technical Component to receive an extension beyond 2020.

Finally, the combination of the widespread social unrest and the COVID-19 pandemic in Chile deserves to be mentioned. For the Technical Component, those factors resulted in the cancellation of some of the NSP activities on the ground and significant adaptations had to be made in order to

maintain as much as possible the objectives and plans for 2020. For instance, civil unrest seems to have contributed to the institutional delays within the national government that partially caused the Financial Component delays, which, as said, particularly affected the NSP. Moreover, interviewees pointed out that organisations implementing SSRE projects have been experiencing delays in their work.

In regard to the impact of COVID-19 on the Financial Component, on the one hand, the pandemic and the recent civil unrest can represent **serious risks to its relevance and effectiveness** as companies may reasonably postpone green investments, since their short-term priority will be to keep their businesses alive. On the other hand, there is a **good opportunity** for the Financial Component to demonstrate its complementarity with the government's strategy for a "green" COVID-19 recovery and increase its impact nationally.

Box 1. Consequences of the delay of the Financial Component

One of the questions in the ELE Terms of Reference was “How severe is the impact of the delayed FC on the TC’s success, and the overall NSP?”. Therefore, in order to give it emphasis and at the same time keep it separate to the analysis related to the Technical Component, we have decided to include it in a dedicated section.

The delay in the implementation of the Financial Component has been the reported “external factor” with probably the biggest impact on the Technical Component. In fact, although many potentially bankable projects had been identified by the Technical Component, only 4 of those reached implementation because of the lack of NSP’s financial instruments. Indeed, in the follow-ups that the Technical Component conducted with all the companies supported through its Helpdesk, a majority of them cited the lack of financial resources as the main obstacle for implementation.

In addition, the delay in the Financial Component launch is creating serious risks to its own implementation. The most evident one is that the technical support void left by the Technical Component will need to be filled effectively and in a timely manner, something which cannot be taken for granted will happen (see Section 4.2.5). Furthermore, the awareness and technical products developed by the Technical Component have a relatively short durability, due to the rapid change of market conditions and technical advancements. Therefore, many of the materials elaborated by the Technical Component might no longer be relevant to raise awareness among potential consumers, by the time the mechanisms of the Financial Component become available. Additionally, the timing of the Financial Component’s start could be tricky, because now numerous other government-sponsored RE initiatives appear to be on the market, which could diminish the value of the NSP’s own instruments.

Another potentially serious risk for the Financial Component is the forecasted reduction of electricity prices in Chile. In the Annual Report 2016, the NSP Team recounts how the substantial changes in the Chilean electricity market in recent years coupled with other factors, such as the reduction of the investment costs for large-scale Non-Conventional Renewable Energy, the abundant RE resources in Chile, and the highly competitive regulatory framework created the conditions for a national electricity auction in 2016. The electricity sold in that auction came from 2/3 from RE sources and the price was historically low. This made the MoE to forecast that the

auction's result would be likely be a 15 to 20% price reduction of the electricity bills for end-consumers, starting in 2021. Such prediction has been confirmed by numerous sources during the ELE. Both teams from the NSP Technical and Financial Components have identified the plummeting of electricity prices in Chile as a substantial risk for the Financial Component. Indeed, a reduction in electricity tariff would reduce the potential savings an SME could make from installing RE and so makes the investment less attractive. This can be particularly true in Chile, where today's SSRE market seems to be very competitive and price sensitive. Furthermore, for those SSRE users who intend to generate more electricity than they need and sell the excess to the grid, a reduction in tariff further erodes the return on investment.

4.3 Impact of the NSP

Table 6: Evaluation Question 4

Evaluation Question	4. What evidence is there that the NSP is likely to contribute to the intended impact in the ToC (incl. transformational change), as well as any unintended or unexpected ones?
Summary	According to the ELE evidence, the SSRE sector will be important to achieve Chile's decarbonisation goals of its energy mix for the next 10-15 years. Therefore, a clear causal link between the achievement of the NSP outcome of "strengthening the SSRE market in Chile" and its overarching impact in the ToC can be validated by the ELE. Unfortunately, because of the lack of Financial Component, at this point, no additional SSRE installed capacity is attributable to the NSP. Concerning the Technical Component's direct contribution to the NSP impact, it has contributed with key analysis and data, which has accelerated different policy and market advancements. Nevertheless, there are still key risks in not having the Technical Component to support the Financial Component, which makes it difficult to say at this point if the NSP will have a sustained impact.

The NSP ToC is based on the assumption that by supporting the strengthening of the Chilean SSRE market, the NSP would then strongly contribute to the decarbonisation of the national energy supply, which in turn would bring with it several other sustainable development co-benefits.

According to the ELE evidence, the SSRE sector will be important to achieve Chile's decarbonisation goals of its energy mix for the next 10-15 years. Many interviewed stakeholders underscored the fact that the scale-up of RE generation (not just in terms of power, but also thermal application) will have to come from a variety of RE sources, technologies and project scales, including the self-supply scale. **Therefore, a clear causal link between the achievement of the NSP outcome of "strengthening the SSRE market in Chile" and its overarching impact in the ToC can be validated by the ELE.**

Unfortunately, because of the lack of Financial Component, at this point, no additional SSRE installed capacity (except for four small projects supported by the helpdesk) is attributable to the NSP. Therefore, a direct causal link between the Technical Component's outputs and the actual growth of SSRE installations in Chile cannot be established at this point. Nor can be seen direct causality between the Technical Component outputs and the launch of financial incentives for renewables currently on the Chilean market (e.g. "Ponle energía a tu PYME", "Crédito Verde", "Casa Solar"). On the other hand, it is also true that these outcomes were outside the scope of the Technical Component alone, and they would have required the interaction between both NSP components.

Therefore, while it is to a good extent possible for the ELE to evaluate the effectiveness of the Technical Component alone in achieving specific Intermediate Outcomes, it is not possible to maintain a clear separation between the Technical and Financial Components when evaluating the likelihood of the NSP to contribute to its intended final outcomes and longer-term impact. In fact, as the project is designed, the synergistic contribution of the two components is essential to the strengthening of the SSRE market (NSP Outcome in the ToC) and the consequent role played by SSRE in the decarbonisation of the national energy sector (NSP Impact in the ToC).

Looking instead at what was in the Technical Component realm of influence, there is highly corroborated evidence from the ELE that it has contributed key analysis and data, which has accelerated different policy and market advancements. For example, when ELE interviewees were asked to rate from 1 to 4 (with 1 being the lowest) the importance of the NSP contribution to the strengthening of the SSRE market, compared to other favourable external factors (e.g. national climate agenda, low PV prices), the NSP's average score was 3.3. This is somehow an excellent result, considering that the Financial Component has not started yet. Besides, one of the key merits of the Technical Component reported by the ELE stakeholders was not focussing only on the already consolidated solar PV market segment, but also on a broad range of SSRE technologies. Despite that effort, however, the desired market diversification in Chile has not been seen yet, and solar PV still dominates it, which leaves space for the Financial Component to further foster non-PV technologies.

In terms of awareness creation, capacity building and policy analysis there is evidence that the Technical Component contributed effectively to the needs of the MoE, responsible for leading the strategic development of the sector. The NSP was important to set up the scope, enhancing knowledge exchange and putting the SSRE issue on the Ministry's table. Positively, the Technical Component's policy support to the government appears to have been demand-driven: for example, two regulatory issues were selected by the MoE every year and the NSP would provide technical assistance on them. Such a high level of engagement strengthened the NSP ownership in the MoE (see also Section 4.5).

On the regulatory side, the ELE confirms that **the Technical Component's contribution to the improvement of the Net Billing law was important to shaping the reform**, which, as mentioned in Section 4.2.2, it has been a crucial factor in supporting the SSRE market growth. More policy and regulatory reforms are needed to improve the enabling environment for SSRE projects, but it is difficult to see how the Financial Component will be able to support that, as it is not within its scope.

Furthermore, while the Technical Component has had an impact in strengthening the SSRE market, the entire context in which the market operates has changed substantially over the past 12 months (e.g. higher economic insecurity, more financial incentives on the market) and there is a risk that the Technical Component's results might not be capitalised on by the Financial Component unless the latter has strong technical assistance that advises on how to restructure the financial mechanisms to be effective in the new market conditions.

Therefore, having the Technical Component extended to run along with the Financial one could strengthen the NSP potential for transformational change, although that appears unlikely to happen. Consequently, at this point of the NSP implementation, it is difficult to say if the NSP will have a sustained impact as the Financial Component will run till 2024.

In conclusion, although the Technical Component's contribution to laying the basis for the NSP's impact has been substantial, since the NSP's impact is underpinned by the results of the entire NSP, including those results of the Financial Component that are currently absent, the ELE Team decided to rate this ToC element as "amber".

4.4 Efficiency of the NSP

Table 7: Evaluation Question 3

Evaluation Question	3. To what extent is the relationship between inputs and outputs timely and to expected quality standards?
Summary	The technical support and advisory service provided by GIZ was perceived as very professional and efficient. The outputs (services and products) delivered by the NSP team were characterised by very high timeliness, coordination, relevance, and quality. The Technical Component products had a high participation share by the MoE and other stakeholders (high-level teamwork). Through the steering committee, regular planning to agree on the priorities for the year occurred, where learning integration was exercised. All interactions between GIZ as delivery partner of the NSP and the NAMA Facility TSU went very smoothly. However, the delays in the Financial Component, as well as the late start of the Technical Component, affected the optimal implementation of the latter.

This ELEQ relates to the OECD DAC's efficiency criterion and seeks to assess quantity, quality, and timeliness of the outputs (e.g. services and products) delivered in relation to the inputs (e.g. human and financial resources) used. In this section, evidence on the appropriateness of the NSP management structure and steering is also included.

As highlighted in the summary, the ELE revealed that the **technical support and advisory service provided by GIZ was perceived as very professional and efficient**. The support was not only limited to their direct counterparts in the DSE, but also involved other government stakeholders, including other departments within the MoE and different authorities (e.g. SEC, ASE, CNR). The MoE and other stakeholders appear to have highly contributed to the drafting of Technical Component's knowledge products (e.g. technical and market studies, information material etc.), which evidenced a high level of teamwork and therefore local ownership. However, the direct work of GIZ and the MoE seems to have been focused on the definition and review of the products, as a good number of the actual products were delivered by local external consultants. That aside, **the ELE received very consistent reports that the outputs elaborated by the NSP team were characterised by very high timeliness, coordination, relevance, and quality and were perceived as very professional**. In terms of contents, a critique brought by two sources noted that environmental and social aspects could have been covered more extensively by the Technical Component's studies, along with capacity building activities, as increasing environmental and social pressures on industry is a strong driver for incorporating SSRE projects and other measures for improvement.

All interactions between GIZ as delivery partner of the NSP and the NAMA Facility TSU went very smoothly. In addition, the internal coordination within the Technical Component appears to have run successfully. For example, through the Technical Component steering committee, GIZ and the MoE regularly met to agree on the priorities for the year and exercise learning integration. However, one

interviewee expressed the opinion that not all relevant governmental key stakeholders have been involved in the steering committee (e.g. the Ministry of Environment, ASE). In hindsight, in light of the lack of time overlap between the Technical and Financial Components, this could have facilitated the handover process between the components and raised ASE's ownership of the NSP to continue the technical assistance after the end of the Technical Component.

Although there was regular communication within the NSP team, the communication and coordination strategy with ASE, the Ministry of Environment and other stakeholders (e.g. implementers associations such as ACERA and ANESCO) was perceived to be not very effective at times, e.g. no timely feedback on expected support, lack of communication about benefits and opportunities of the project, or failure in appropriately communicating the Financial Component's delays. One source also noted issues with staff turnover, which resulted in gaps between the changes in the leadership of the Technical Component. This claim has been disputed by the NSP Team.

The interviews revealed as well that **different divisions and departments of the MoE were not always aligned with common governmental objectives**, but had their own partial agendas. This was partially due to internal restructuring within the MoE. All of this led to challenges for the NSP in their coordination and involvement, for instance in regard to ensuring that the institutional knowledge, supported by the Technical Component, was not lost. According to some interviewees, the MoE at times tried to influence the direction of the work of the NSP according to their own needs or towards the agenda of ASE, which were not always aligned with the NSP's original goals. For example, after the MoE restructuring merging the energy efficiency and the renewable energy divisions, the MoE tried to expand the scope of the NSP to include energy efficiency and the TSU had to step in to limit that expansion in scope. Despite that instance, **the ELE found there was enough flexibility for the NSP to adapt well to the MoE's technical support needs**.

In conclusion, the ELE evidence presented above supports the decision of the ELE Team to rate the effectiveness of the Technical Component as "green".

4.5 Sustainability of the NSP

Table 8: Evaluation Question 5

ELE question	5. What is the likelihood that the outcomes will be sustained after the end of the NSP funding period? ²⁴
Summary	In general, the strong alignment of the NSP's goals to the government's long-term climate and sustainable development agenda coupled with the persistent needs of the SSRE market for improved financial accessibility are indicative factors about the high likelihood of long-term sustainability of the NSP outcomes. Positively, the MoE shows evidence of strong ownership of the NSP and seems to be ready to provide continuation to key NSP products. However, several stakeholders noted that the handover process itself could be a key challenge and might fail if GIZ is not appropriately involved in the planning of the Financial Component. In addition, while on paper there are clear roles and responsibilities for the different sub-components of the Financial Component, it is not clear who will be the future project leader of the NSP. Furthermore, the future lack

²⁴ Due to the delays in the Financial Component's implementation, the ELE can only provide a preliminary assessment of the NSP's sustainability, based on the Technical Component's ability to lay the foundation for a sustain the change.

of technical support through the Technical Component might be a big challenge for NSP's sustainability.

Generally speaking, the sustainability of a project is primarily concerned with measuring to what extent the benefits of project outcomes are likely to continue after the assistance has stopped. Therefore, in answering the ELEQ on sustainability, the analysis covered the key stakeholders' ownership over the NSP's objectives and achievements, the continued political commitment and policy support as well as financial perspectives.

In general, the strong alignment of the NSP's goals to the government's long-term climate and sustainable development agenda, coupled with the persistent needs of the SSRE market for improved financial accessibility, are indicative factors about the **high likelihood of long-term sustainability of the NSP outcomes**. However, a lot will depend also on the ability of the future NSP team to shape and flexibly adapt the Financial Component to match the market fast-evolving developments and the COVID-affected economic situation. For example, as coal-fired power plants in Chile are due to be phased out by 2040, and many of them will be closed as early as 2025, with a lower carbon-intensive national grid, investors and end-users might be less incentivised to invest in SSRE. Nonetheless, it is fair to say that, so far, the Technical Component was able to closely monitor the SSRE market evolution and effectively adapt to it.

Positively, the MoE shows evidence of strong ownership of the NSP and seems to be ready to provide continuation to key NSP products, such as the running of the MRV framework for large and small scale RE projects and the different price indexes of SSRE technologies that the Technical Component has initiated. However, concerning the MRV framework's sustainability for the RE/SSRE component, it appears that discussions on roles and responsibilities within the national system between the MoE and the Ministry of Environment (as well as with other line ministries) are still ongoing.

Several stakeholders noted that the handover process between the Technical to the Financial Component could be a key challenge and might fail if GIZ is not appropriately involved in the planning of the Financial Component. The risk comes not only from the non-existent chronological overlap between the two components but also by the reported insufficient inclusion of GIZ by the Financial Component's team (except KfW) in the definition of the Financial Component planning after its request for extension of the Technical Component was rejected. Needless to say, the ELE Team finds close coordination with and knowledge transfer by GIZ critical for the successful handover between the components. A positive note in this sense is the reporting by GIZ that they are dedicating the final months of the Technical Component to properly collating and archiving the outputs and results delivered to make it easier for the Financial Component to retrieve the knowledge produced by the NSP. In addition, the cross-over of the same MoE department (DSE), as key implementing partner of the Financial Component, substantially increases the chances of institutional knowledge retention within the NSP.

While on paper there are clear roles and responsibilities for the different sub-components of the Financial Component, to several interviewees, it was not clear who will be the future project leader of the NSP, when the Technical Component finishes. Although the MoE and CORFO are in charge of two sub-components each – respectively sub-components 1 (pre-investment studies) and 2 (grants), and sub-components 3 (capacity building of FIs) and 4 (guarantee fund) – it will be challenging to

deliver them in continuous coordination if there is no “head” or clear leadership of the whole NSP in the government. There is a risk that if appropriate coordination mechanisms are not put in place, the NSP will be delivered as disjunct components, rather than a single cohesive project, and increase the risk of inefficiency. Some hints of differences in expectations from the NSP between CORFO and the MoE have been highlighted during the ELE, for instance, about different views on the timing of the launch of the different sub-components. Potentially, the role of NSP lead could be played by KfW, but there are two risks with that. Firstly, KfW is not part of the Chilean government and this could reduce the ownership of the overall NSP. Secondly, to the date of the ELE, KfW only contracted one consultant in Chile on a freelance and part-time²⁵basis, and, without any judgement of the consultant’s capabilities, it appears to be insufficient to take the lead of the NSP. Therefore, as mentioned above, the NSP lead should be provided by the Chilean counterpart. During the Technical Component such risks were effectively mitigated by having the MoE as single Implementing Partner and locating a small team of GIZ experts within the same building of the MoE. Similar arrangements for the Financial Component could be useful, or at least, it would be important to establish a governing body for the Financial Component.

Furthermore, as new tasks like the reorganisation of the energy distribution or the promotion of new financial models arise, **the future lack of technical support through the Technical Component might be a big challenge for the NSP**. The MoE and CORFO might have as well difficulties in moving as fast as GIZ with their sub-components (e.g. in terms of developing new technical studies or awareness products). ASE was named as the preferred technical backstopper for the Financial Component, but its practical involvement might be challenging for lack of a dedicated budget for the NSP, as mentioned in Section 4.2.5.

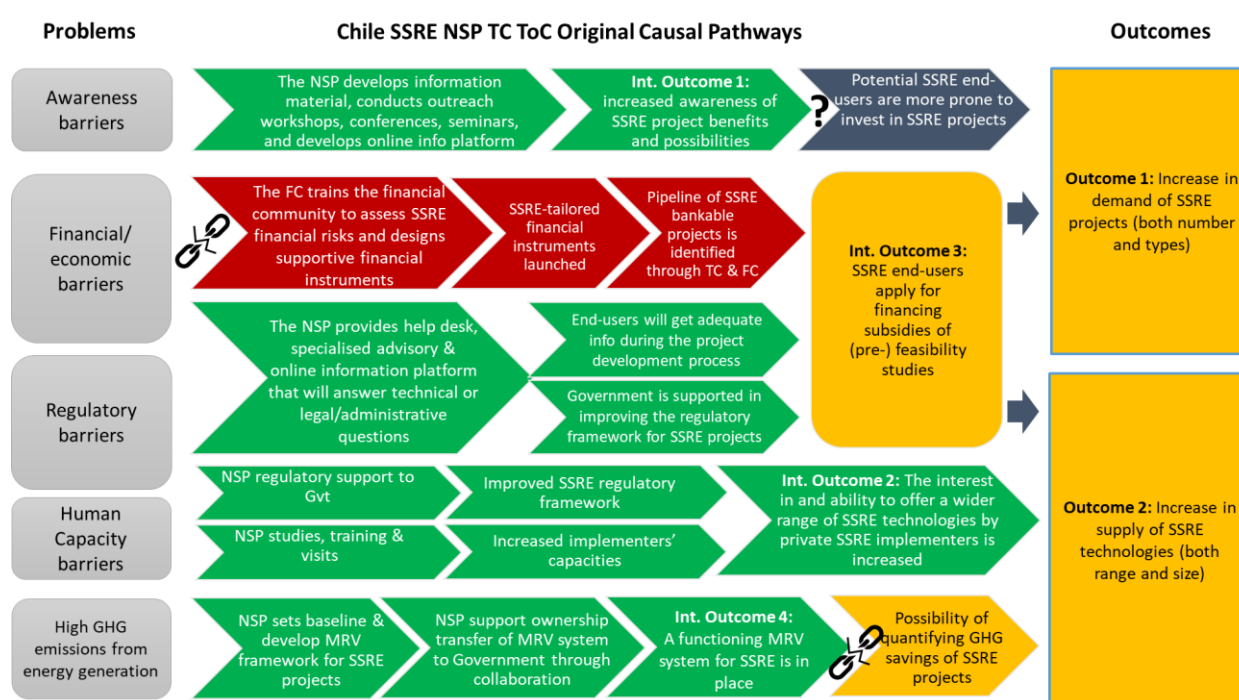
In conclusions, while some of the intermediate outcomes of the Technical Component are more likely to be sustained in the longer term (e.g. the MRV system and the improvement of the SSRE regulatory policy and framework), there are concrete – but not insurmountable – risks to the sustainability of other intermediate outcomes throughout the Financial Component and beyond (e.g. maintaining the awareness of and technical assistance to end-users, FIs, and government high). Therefore, the ELE Team has rated the sustainability of the NSP’s outcomes as “amber”.

²⁵ The consultant is at the same time Executive Officer at the Chilean Hydrogen Association and has other responsibilities.

5 Conclusions

Now that the evidence collected and analysed by the ELE has been explored, this section goes back to the NSP Theory of Change to test to what extent the original causal pathways and assumptions behind them have held.

Figure 4: Overview of NSP Causal Pathways Assessment (Technical Component focus)



Note: TC = Technical Component; FC = Financial Component

Figure 4 presents an overview of the progress of the NSP along its ToC causal pathways towards its intended outcomes. A description of the causal pathways is provided in Section 3. The RAG rating uses the same scale as the previous section (i.e. Good / Very Good = Green; Problems = Amber; Serious deficiencies = Red) and the colours of the Intermediate Outcomes' shapes are the same colours used in Section 4.2 to rate the NSP's achievements for each Intermediate Outcome. This is to be read as an assessment of the NSP's situation at this point in time, when the Technical Component has almost completed its course and the Financial Component is about to take the baton on.

What transpires from Figure 4 is that, whenever the Technical Component did not have to substantially rely on the Financial Component to achieve its intermediate outcomes, the NSP causal pathways seem to have held well. These are the cases of the pathways for Intermediate Outcomes 1, 2 and 4. In the case of Intermediate Outcome 3, which referred to the SSRE stakeholders applying for financial incentives, the causal pathway could not fully hold because of the lack of the Financial Component (i.e. no financial mechanisms have been implemented yet).

The other conclusion coming from Figure 4 is that the Technical Component has taken the NSP as far on its ToC as it could, and for the NSP to achieve its intended outcomes and contribute to its transformational change impact, the success of the Financial Component will be crucial. In fact, all

the broken links on the NSP ToC causal chain in Figure 4 are solely related to the absence of the Financial Component.

An exception is the question mark on the Intermediate Outcome 1 pathway, which refers to the question “does increasing awareness on SSRE projects make SSRE end-users more prone to invest in SSRE projects?”. As of today, although the SSRE market has been growing consistently, the ELE has not enough evidence to state to what extent the NSP has contributed to that growth. However, should the Financial Component have directly supported SSRE end-users in investing in SSRE installations, then the ELE would have been able to answer that question and assess the causal link.

Finally, process tracing was applied as an additional test to check the validity of the NSP ToC and assess the strength of the evidence collected by the ELE. The results of the process tracing tests did not contradict the findings presented in the body of the report (see Annex D). In summary, process tracing confirmed that, at this point in time, there is sufficient evidence to confirm the validity of the hypotheses behind the causal pathways for Intermediate Outcomes 2 and 4 (i.e. the NSP’s direct contribution to the strengthening of SSRE implementers and the national ability to MRV the GHG savings from SSRE projects); reasonable but not sufficient evidence to verify the hypotheses behind the causal pathway for Intermediate Outcome 1 (i.e. the direct contribution of the NSP-fostered awareness on SSRE to the increase in demand of SSRE projects in Chile); and insufficient evidence to either confirm or reject the causal pathway’s hypotheses for Intermediate Outcome 3 (i.e. the direct contribution of the NSP-supported SSRE projects to the increase in demand of SSRE projects in Chile), because this is largely dependent from the Financial Component’s implementation (see Figure 4).

6 Lessons and recommendations for the continuation of the NSP

6.1 Key lessons

The evidence gathered and the discussions occurred during the ELE helped identify lessons from the Technical Component implementation to the benefit of the continuation of the NSP. Such lessons are presented below, categorised into 7 main needs for the successful continuation of the NSP. These are:

1. Maintain flexibility in the project focus to respond to context changes

As reported in previous sections, there is evidence that the Technical Component team showed a good level of flexibility to respond to context changes. For instance, while its initial approach was more focused on solar PV, the team was able to redirect its focus on non-PV SSRE technologies, when it became clear there were knowledge and support gaps to fully develop this market. At the same time, the NSP must remain within its given boundaries according to the project scope (ToC) approved by the NAMA Facility. For instance, in the past, the MoE tried to push the NSP towards covering energy efficiency which was clearly beyond the project scope. Therefore, as the interviews confirmed, a lesson for the Financial Component is that it will be important to maintain such flexibility in the NSP implementation, but without losing sight of its overarching goal. This could include redirecting the NSP's short- and medium-term focus to align with the government's agenda for a green recovery from COVID-19, and with changes in SSRE technology advancements or market niches. To do this, it is likely that the Financial Component will require ongoing technical assistance to keep track of the SSRE market development as well as to provide support to the financial sector (see below). The TSU/NAMA Facility should take these assessments into consideration.

2. Keep technical assistance and capacity building for the financial sector as a high priority

Concerning the Financial Component, technical assistance and capacity building for the financial sector is still very necessary and requested (e.g. to lower general administrative barriers and keep the responsibility of technical assessment of the proposed investments away from the banks). One area of focus for technical support is, among others, to help develop financial mechanisms for the SSRE market that are based on transparent assessment criteria, which should include environmental and social aspects too. It is also important to further develop the pipeline of bankable projects as, given the delay in starting up the Financial Component, the list may now be outdated, and the motivation and risk perception of the end-users might have changed, as highlighted by the update of the Technical Component's Help Desk consultancies. The updating might require a large effort and follow-ups, including close coordination with the specific needs of the financial sector, which implies regular interactions and engagement to design an effective process that fulfils expectations and needs from all stakeholders and results in a portfolio of projects that are ready to receive finance. In addition, building the capacity of the banks to better understand the economic specificities of SSRE projects, which can be more complex than, for example, mainstream mortgage calculations, will be a key for success.

Unfortunately, due to the absent overlap of Technical and Financial Components, the Technical Component will not be able to cover the upcoming requests for assistance, which already in the initial project proposal was perceived as a risk for the success of the NSP. If the NSP would have known since the beginning that the financial component would come in 2021, things would have been probably different and the Technical Component could have promoted alternative funding opportunities. In addition, the risk for the lag of technical backstopping, e.g. through ASE, has to be flagged in this regard, as highlighted already in the previous chapters. In the ELE Team's opinion, the successful delivery of the Financial Component will require close coordination between MoE (funding feasibility studies), CORFO (capacity building to financial institutions) and eventually ASE (technical assistance to the financial institutes based on the feasibility studies).

3. Improve visibility, dissemination and communication

The extensive work on awareness-raising and dissemination done by the Technical Component has to be acknowledged, and ideally should be continued also by the Financial Component (e.g. through updating existing NSP materials). However, the Financial Component is not in a position to do that, there is neither mandate nor budget for that allocated by the NAMA Facility. This provides further uncertainty in the handover between the two NSP components. Moreover, some dissemination gaps in terms of targeting, e.g. implementers associations and rural stakeholders, were identified by some interviewees. About the latter, in fairness, the NSP has implemented training course in various remote regions in Chile during 2019, in collaboration with the MoE's initiative "*Gestiona Energia*". It will be important for the Financial Component to widen the target audience and diversify the dissemination channels. The communication strategy with some stakeholders was perceived to be not very effective at times and could be strengthened to reach a broader spectrum and amplify the targeted stakeholders. For instance, there is the need to get through to stakeholders who are not confident with digital communications or who are without internet access, diversifying the type of media used for dissemination, and using existing data bases from other public programs that work with overlapping target groups. In this regard, it will also be important to align the existing communication activities to the NSP's financial mechanisms and to showcase the potential of NSP for a green COVID-19 recovery.

4. Broaden the view on and coordination with available financial instruments beyond the Financial Component

The ELE found that the financial landscape of RE incentives in Chile has evolved substantially since the beginning of the NSP. The Financial Component will have to **fully understand** and coordinate with the already available financial instruments (e.g. guarantee funds, green certificates, revenues from offsets) and models (e.g. ESCOs, green mortgages) in Chile, in order to maximise its efficiency and impact. In this regard, the recently launched UK Export Finance (UKEF) "[Clean Growth Direct Lending Facility](#)" can be perceived for instance as a complementary instrument to the NSP, rather than an overlapping or competitive one. Mapping initiatives on an ongoing basis will be important. Positively for the NSP, the Technical Component has recently produced an infographic of the existing financial instruments for SSRE in Chile. Furthermore, both CORFO and the MoE are also directly or indirectly involved in many of the other initiatives and can facilitate that monitoring and coordination process. This may mean also filling the financial gaps for non-PV SSRE technologies, as the NSP has been already

doing so far. The NSP could widen the scope towards other RE niches (e.g. heat, biogas, biomass, geothermal, less PV focus), as well as other regions (more rural and remote areas included).

5. Improve coordination and alignment with the Chilean government

As highlighted above, a key to the Financial Component's success will be the involvement of, and coordination and alignment with, the Chilean Government (including the MMA, the Ministry of Finance and possibly regional authorities), which could be improved or intensified, especially during the handing over process between the two NSP components and regarding knowledge management and trust-building. It was also noted in earlier sections of this report that coordination between the Financial Component, ASE and other national financial agents could be strengthened, e.g. to facilitate the further improvement of the regulatory framework supporting SMEs on the SSRE market (see Section 4.2.5). In addition, it is important that the administrative procedures and requirements for the financial instruments and incentives, both internal and external to the NSP, are streamlined and harmonised, and transparency in the financial mechanisms' allocations is ensured.

As a consequence of all of the above, the need for more decision-making power in the NSP governance structure is required, to expand it from merely technical advisory service to include actual political steering as well. When this matter was discussed with the NSP Delivery Partners at the ELE Validation Workshop, a possible solution proposed for the Financial Component was to set up a high-level political committee in addition to the technical NSP Steering Committee.

6. Support the shaping of a sustainable and fair SSRE market in Chile

It is important to strengthen the relationship with and increase the participation of key stakeholders (e.g. implementers associations, ASE, CAMCHAL), to better shape the NSP products to meet current market needs. In this regard, a stakeholder stated that GIZ focused too much on contacting end-users through sectoral associations and not enough through other equally effective channels, such as public entities which are permanently in touch with potential beneficiaries (e.g. CNR, Agricultural Development Institute (INDAP), Technical Cooperation Service (Sercotec)). It has to be noted that GIZ provided examples showing they have had regular communications with these stakeholders. Possibly, further exchange and work by the Financial Component could be done with the industry sector (e.g. in regard to the new project "Casa Solar" or concerning commercial opportunities with foreign companies). That said, to make the NSP interventions effective and sustainable some RE niches are better left out, since they might require too much effort and budget from the project. Another interview suggested there are a few ESCOs or technology providers that are becoming too big and there is a danger they may dominate the market. This could be a threat to small and medium companies that cannot compete with large corporations. Some are worried that the same big companies that are leading the energy market up to now will also take on the RE market. Generally speaking, the concentration of power in the hands of few big corporations seems to be one of the main reasons for the social unrest in Chile, so this aspect should not be overlooked by the NSP. The NSP can have a positive impact in this respect by promoting the development of SMEs in the energy sector and shaping a fairer and more competitive SSRE market.

7. Exchange learning with other NSPs and initiatives, inside and outside of Chile

The learning exchanged and interconnections with other GIZ projects were perceived as crucial for further success, as were the interaction and knowledge sharing (e.g. on lessons on management and methodologies) with NSPs in other countries. For example, in 2019, the Chile SSRE NSP participated in a workshop organised by the TSU in Bonn. Given the similarities of the objectives and target groups between this NSP in Chile and the NSP in Mexico “Energy Efficiency in SMEs as a Contribution to a Low Carbon Economy”, the team from the Chile NSP shared some of their experiences and methodologies, particularly regarding the development of annual PV price indexes. Lessons from the Chile experience were then taken up by the Mexico NSP, which in 2020 published their first PV price index and mentioned the PV price index of the Chilean NSP as one of the prime methodological resources. This shows how crucial for the NAMA Facility to foster this kind of exchange in the future, but also to establish a knowledge management system, which will facilitate the sharing of know-how between the NSPs. In addition, examples, like the one from the NSP in Mexico, show the transferability and potential for learning multiplications.

6.2 Recommendations to the benefit of the Financial Component

To achieve the impact of sustainable change in the energy mix of Chile, exhaust the potential of the NSP and further improve the outcomes to strengthen demand and supply of SSRE projects (both in number and types), recommendations for the integration of the ELE lessons into the NSP implementation were derived. They are presented in Table 9, grouped under the 7 key needs presented in Section 6.1.

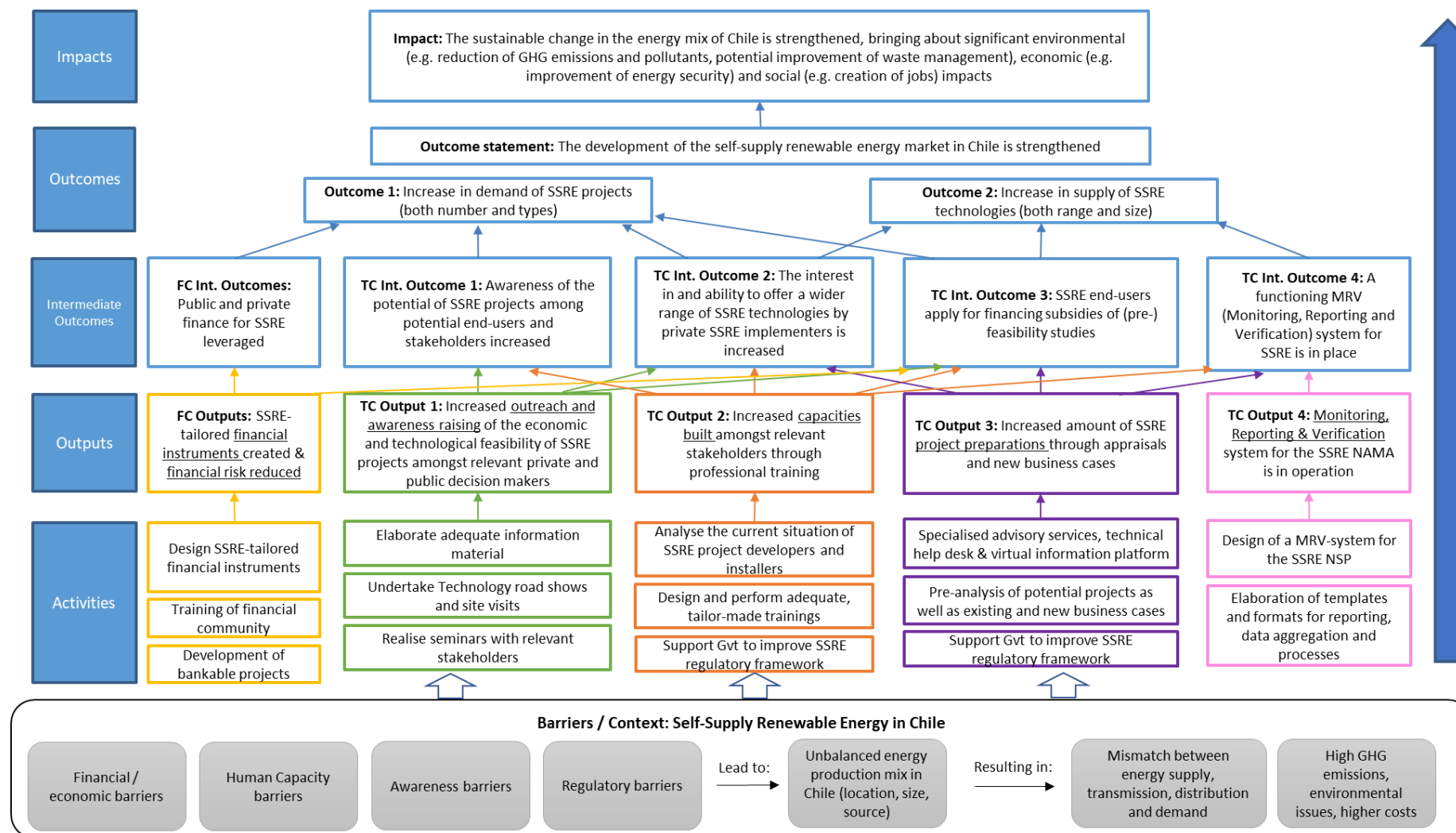
Table 9: Recommendations to the benefit of the Financial Component

Lesson	Recommendation
1. Maintain flexibility in the project focus to respond to context changes	<ul style="list-style-type: none"> Keep the NSP objectives central by having KfW playing the role of “guardian” of the NSP ToC and the alignment with NAMA Facility ToC, without losing the flexibility and balance to be able to include goals useful to the local implementing partners too. Create a high-level political coordination table (see recommendation n. 5) to keep the Financial Component aligned and coordinated, thus avoiding overlaps with other existing mechanisms. Institute an internal NSP learning mechanism to monitor the outcomes and learning from the implementation of the Financial Component and subsequently adapt it.
2. Keep technical assistance and capacity building for the financial sector as a high priority	<ul style="list-style-type: none"> Keep the coordination and engagement of the financial sector close, especially CORFO with its financial intermediaries, to understand exactly what the banking sector requires. CORFO’s knowledge will be very useful in this regard. Explore the possibility of moving some of the NSP budget to beef up the sub-component “Training and Advisory Services for the FIs” to be used for additional requirements of technical assistance from the Financial Component, including the technical review of project feasibility studies. This could be delivered by ASE in collaboration with CORFO or it could be outsourced.

Lesson	Recommendation
3. Improve visibility, dissemination and communication	<ul style="list-style-type: none"> • Update the material produced by the Technical Component and continue to showcase good practices and current financial opportunities. • Diversify the media channels used by the NSP dissemination activities, to include also non-digitally educated stakeholders and rural or remote users. • Expand the target audience of the communication material to include a larger number of implementers associations, that can themselves amplify the NSP visibility (e.g. to rural users). • Explore working with implementers organisations or directly with SMEs that are already beneficiaries of other public agencies (e.g. CNR, ASE) to reach a wider audience of end-users and implementers. • Use the activities under sub-component “Grants for Pre-Investment Studies” to provide close follow-ups on companies and bring the SSRE projects to the finish line as well as monitor the outcomes after the installations. • Develop an awareness-raising strategy to include, for instance, the win-win concerning the alignment of climate actions with the COVID-19 recovery package.
4. Broaden the view on and coordination with available financial instruments beyond the Financial Component	<ul style="list-style-type: none"> • Update the infographic created by the Technical Component that maps current financial initiatives related to SSRE and keep this as a live document by regularly monitoring the market developments. This should be done by building on existing resources that the MoE, CORFO or the Ministry of Finance may already have. • The map of financial incentives should provide transparent information also on the available budgets and selection criteria behind different financial initiatives. • Make full use of the NSP Steering Committee to apply the institutional knowledge of CORFO and the MoE to lead and coordinate the Financial Component activities in a complementary way with existing initiatives. • Find the right entry points and niches in the SSRE market for the Financial Component’s instruments to maximise their impact.
5. Improve coordination and alignment within the Chilean government	<ul style="list-style-type: none"> • Explore the opportunity of reforming the NSP governance to include a high-level political body (NSP Steering Board) and a technical advisory body (NSP Advisory Committee). Moreover, explore ways to include ASE, the Ministry of Finance, the Ministry of Environment, and/or other key government stakeholders in the NSP advisory governance. • Similarly to what was done for the Technical Component delivery, explore the possibility to build a KfW team to be based in Chile to work in proximity of the national implementing organisations. • Keep GIZ closely involved in the Financial Component’s inception phase and potentially have regular exchanges with them later on, to ensure the institutional knowledge from the Technical Component is not lost. However, this would depend on the resources provided by GIZ, as the NAMA Facility does not foresee any support in this regard. • Facilitate GIZ’s knowledge sharing with ASE e.g. as part of the handover process between the Technical and Financial Components. The handover is recommended, as it is not currently planned. • Find ways to capitalise from the NSP-facilitated intra-government coordination to push ahead the addressing of the remaining SSRE market barriers, such as

Lesson	Recommendation
	policy and regulatory barriers, and the harmonisation and transparency of the financial schemes and mechanisms.
6. Support the shaping of a sustainable and fair SSRE market in Chile	<ul style="list-style-type: none"> • Be present and close to decision-makers to influence and align their agenda with fostering a fairer and more competitive SSRE market. • Design the financial instruments supported by the NSP to be inclusive of small and medium implementers and beneficiaries. Get the support of implementers associations and other key stakeholders to achieve such inclusiveness. • Improve the link with the industry sector and work together to strengthen the SSRE market niches through commercial opportunities.
7. Exchange learning with other NSPs and initiatives, inside and outside of Chile	<ul style="list-style-type: none"> • Be proactive in advocating for further learning exchange opportunities with other NSPs. This could involve one or more of the following: (i) exploring with the NAMA Facility TSU the possibility of additional knowledge-sharing events between multiple NSPs; (ii) discussing with the TSU the appropriateness of creating a knowledge management system to facilitate the sharing of know-how between the NSPs; (iii) directly approaching other relevant NSP teams (e.g. including building up previous exchanges with the Mexico Energy Efficiency NSP). • Within Chile, continue to proactively look for learning exchange opportunities with other relevant initiatives, e.g. UK Embassy on their past and current projects in Chile as well as other global initiatives such as the UKEF Clean Growth Direct Lending Facility, CAMCHAL's environment and energy programme, etc.

Annex A Theory of Change of the Chile SSRE NSP



Key assumptions underpinning the NSP Theory of Change

ToC element	Underpinning assumptions
Impact	<ul style="list-style-type: none"> • National political support for SSRE remains and will not be withdrawn • There are no major economic, social, or political shocks in-country which could outweigh emission reduction efforts • NSP outcomes feed into improved national policies and processes, and lead to concrete climate action at scale
Outcome	<ul style="list-style-type: none"> • The Chilean government owns the NSP's knowledge and experience so that its results are sustained in the longer-term • The economic and other co-benefits of SSRE are sufficient to outweigh the risks posed by key externalities (e.g. grid electricity price reduction, COVID-19, civil unrest)
Intermediate outcomes	<ul style="list-style-type: none"> • NSP outputs are applicable, relevant, and useful to their intended beneficiaries in their intended contexts • Key externalities are properly addressed by the NSP strategy • Technical and financial support to the SSRE market happens synergistically
Outputs	<ul style="list-style-type: none"> • End-users and other relevant stakeholders have general interest in participating in awareness initiatives and require additional information on SSRE projects. • SSRE implementers have general interest in participating in training and other capacity building initiatives and lack in technical information and capacity to implement a wider breadth of SSRE projects. • Technical expertise from the NSP is sufficiently skilled, resourced, and supported to deliver value • NSP informational and technical material (including the MRV system) are of sufficient quality to deliver value

Annex B Evaluation and learning exercise matrix

This evaluation and learning exercise matrix is based on the Theoretical Framework provided (version May 2020). It is a working tool that allows the evaluators to focus on a feasible target and assemble information for each question that can be synthesised in the final report, hence creating an integrative overview of the Chile Self Supply Renewable Energy NAMA Support Project at large. The evaluation matrix is a working tool and may be adapted slightly in the course of the evaluation if further relevant questions come up. A final version of the matrix will be included in an annex of the final report.

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
1 RELEVANCE					
1	To what extent does the NSP address an identified need (by national government, SMEs and project developers)?	<ul style="list-style-type: none"> The NSP design responds to the beneficiaries' needs and strategic priorities at the time of adoption; and still continues to respond to priorities given the evolving challenges and priorities in the Chilean energy market context. NSP is aligned with the needs of energy authorities, SMEs and energy project developers. 	<ul style="list-style-type: none"> The TC of the NSP will address existing SSRE barriers particularly in human capacities and awareness with its planned activities. The TC of the NSP will advise the government so that regulatory barriers to foster the development of SSRE projects can be addressed 	<ul style="list-style-type: none"> Direct beneficiaries (government, SMEs and project developers) NSP Team TSU Independent verifiers (Industry associations, non-NSP consultants working on energy sector, Development Partners, academics) 	<ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews (KIIs) Context analysis Document review (Project concepts (logical framework matrix) and progress reports) National plans, strategies and other policy instruments such as norms, standards, etc.
1.1	How well does the NSP align with government and agency priorities in regard to GHG emissions from the energy sector?	<ul style="list-style-type: none"> The project is in line with Government targets on environmental emissions (incl. NDC, sectorial plans, etc.) 	<ul style="list-style-type: none"> Chile SSRE NSP will support Chile's overall climate and energy strategy 	<ul style="list-style-type: none"> Direct beneficiaries from government NSP Team TSU 	<ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews (KIIs) National plans and strategies on climate change and energy Data from NSP monitoring system
1.2 (Proposed by ELE team)	Did changes in the NSP-operating context affect the relevance of the project?	<ul style="list-style-type: none"> The project's goals and specific objectives and needs are still valid. Several assumptions and causal pathways outlined in the TOC remain valid, after adaptations and refinements 	<ul style="list-style-type: none"> Chile SSRE NSP's efforts are long-term national priorities that are not affected by short-term context changes (e.g. local and general elections, changes in personnel, COVID-19) 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews (KIIs) Progress reports Semi-structured KIIs Document review

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
2 EFFECTIVENESS					
2	To what extent has the implementation of the NSP been achieving intended outcomes in the short, medium, and long term?	<ul style="list-style-type: none"> ▪ The degree to which there are evidence of the expected results / Interim Outcomes in the ToC: <ul style="list-style-type: none"> ○ Public and private finance for SSRE leveraged ○ Awareness of the potential of SSRE projects among potential end-user stakeholders increased ○ The number of private companies that implement SSRE projects is increased ○ SSRE end-users apply for financing subsidies of (pre-) feasibility studies ○ Functioning MRV (Monitoring, Reporting and Verification) system for SSRE is in place ▪ The strength of the NSP contribution to the realisation of those outcomes (see link between outputs and outcomes) ▪ For each of the outcomes consider the major constraints and opportunities experienced (success and hindering factors) 	<ul style="list-style-type: none"> ▪ TC activities will increase demand as well as the supply of SSRE projects. The TC will support to create a project pipeline of potential SSRE projects. Increased demand and supply are effective and essential aspects for a further development of the SSRE market in Chile. 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ NSP Team ▪ TSU ▪ Independent verifiers 	<ul style="list-style-type: none"> ▪ In-depth interviews ▪ Semi-structured key informant interviews (KIIs) ▪ NSP proposal ▪ Progress reports ▪ Data from NSP monitoring system / logframe
2.1	For each output, what were the major constraints and opportunities experienced in implementing the activities? For each output, what were the particular features of the project and context that	<ul style="list-style-type: none"> ▪ Evidence of the delivery of intended outputs ▪ The strength of the NSP contribution to the delivery of those outcomes ▪ For each of the output consider the major constraints and opportunities experienced (success and hindering factors) 	<ul style="list-style-type: none"> ▪ Implementing the intended activities (as per ToC) will deliver the expected outputs ▪ The NSP is the main factor in the delivery of the outputs 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ NSP Team ▪ TSU ▪ Independent verifiers 	<ul style="list-style-type: none"> ▪ NSP proposal ▪ Progress reports ▪ In-depth interviews ▪ Data from NSP monitoring system ▪ Semi-structured KIIs

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
	made a difference in achieving these outputs?				
2.2 (Proposed by ELE team)	Are results that are reported for the five mandatory core indicators by the NAMA Facility (M1-M5) in line with the NAMA Facility's M&E framework?	<ul style="list-style-type: none"> Level of achievement of M1-M5 targets by the project Circumstances (positive and negative) that influenced the performance on the M1-M5 indicators 	<ul style="list-style-type: none"> The NSP will support the achievement of NAMA Facility's core indicators 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> NSP proposal Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs
2.3	Structure & steering: Has the NSP been managed, coordinated, and implemented effectively?	<ul style="list-style-type: none"> The chosen implementation mechanism is conducive to achieving the expected outcomes The technical component is tailor-made for achieving the planned outputs Communication and visibility are implemented according to an integrated approach FC and TC interact synergistically Stakeholders are participating and collaborating actively in the intervention 	<ul style="list-style-type: none"> SSRE NSP team has the right governance structure to effectively coordinate with key stakeholders Key stakeholders fully own and commit to their role in the NSP TC and FC run in parallel, coordinating with and sustaining each other's work and results 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs
2.4	Were there additional outputs and/or outcomes obtained that were not planned in project design (unintended outcomes)?	<ul style="list-style-type: none"> There is evidence of the NSP's contribution to unintended or unexpected results If there are positive unintended results, the NSP team has been able to capitalise on them to sustain the intended outcomes If there are negative unintended results, the NSP team has been able to appropriately identify, address and learn from them. 	<ul style="list-style-type: none"> The NSP management has been appropriately designed to identify, address / capitalise from, and learn from unintended outcomes 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU 	<ul style="list-style-type: none"> NSP proposal Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
2.5 (Proposed by ELE team)	Did changes in the NSP-operating context impacted (positively and/or negatively) on the effectiveness of the project? If so, to what extent (greatly, partially, negligibly)?	<ul style="list-style-type: none"> The level of NSP contribution to the achievement of the results compared to exogenous factors. Several assumptions and causal pathways outlined in the TOC remain valid, after adaptations and refinements 	<ul style="list-style-type: none"> The NSP is the main cause of the achievement of the intended and unintended outcomes 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs Literature review
2.6 (Proposed by ELE team)	Has the NSP M&E framework been able to adequately function?	<ul style="list-style-type: none"> The proposed NSP M&E framework adequately reflects the challenges, outcomes and impacts of the program The logical framework is used as reference tool for monitoring (regularly updated) 	<ul style="list-style-type: none"> The M&E is setup and implemented based on KPI The logframe is regularly updated and used as a learning tool 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU 	<ul style="list-style-type: none"> Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs
2.7 (Proposed by ELE team)	How has learning been integrated within the project?	<ul style="list-style-type: none"> The presence and effectiveness of institutionalised learning and adaptation mechanisms within the NSP 	<ul style="list-style-type: none"> The NSP team regularly identify learnings, reflect on them, and accordingly adapt the ToC and implementation of the project 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU 	<ul style="list-style-type: none"> Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs
3 EFFICIENCY					
3	To what extent is the relationship between inputs and outputs timely and to expected quality standards?	<ul style="list-style-type: none"> Timeliness of the delivery of outputs and outcomes (incl. budget spending) If there are delays in the implementation, what have caused them (endogenous or exogenous factors) and how seriously have they impacted the NSP implementation? The effectiveness of the measures adopted to reduce the delays The level of satisfaction of the NSP direct beneficiaries 	<ul style="list-style-type: none"> TC activities run smoothly, on time and on budget. Coordination with other projects of the Chilean government focusing on RE and using synergies with further projects (by development cooperation and Chilean government) within the renewable energy sector will add to the efficiency of the TC. The cooperation with industry association will support an efficient information 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU 	<ul style="list-style-type: none"> NSP proposal Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
			dissemination and stakeholder identification.		
4 IMPACT					
4	What evidence is there that the NSP is likely to contribute to the intended impact in the ToC (incl. transformational change), as well as any unintended or unexpected ones?	<ul style="list-style-type: none"> The strength of the evidence that key outcomes are going to be achieved and the robustness of the causal links / pathways to the intended impact (namely increase in demand of SSRE projects, supply of SSRE technologies and GHG emissions reduction and co-benefits) The extent of how transformative the NSP is likely to be based on current evidence 	<ul style="list-style-type: none"> Direct: TC activities will be a key to support the determination of a pipeline of potential SSRE projects that will eventually replace fossil fuels when completed. Indirect: TC initiatives will build mitigative capacity in Chile and the build-up of institutional capacities to undertake a larger number of projects in the future. 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> NSP proposal Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs
4.1 (Proposed by ELE team)	In the context of other public and private initiatives in Chile in relation to clean energy, how significant has the NSP been and how far can its catalysing effect be confirmed?	<ul style="list-style-type: none"> The likelihood the NSP will catalyse additional, large-scale, sustained GHG savings (intentionally or unintentionally) The size of leveraged public and private investments by the NSP compared to other similar clean energy projects in Chile 	<ul style="list-style-type: none"> The NSP plays a crucial role as catalyser for scale up and replication of SSRE projects in Chile 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs Data from NSP monitoring system Literature review
5 SUSTAINABILITY					
5	What is the likelihood that the outcomes will be sustained after the end of the NSP funding period?	<ul style="list-style-type: none"> The extent of the evidence supporting the NSP sustainability (e.g. evidence of self-sustaining institutional structures, and political and financial commitment of key stakeholders) There is little or no risk of backsliding or reversing 	<ul style="list-style-type: none"> TC activities will help strengthen the SSRE sector in Chile and the capacities built will stay and serve other private or public related initiatives, beyond the scope and duration of this NSP project. 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> NSP proposal Progress reports In-depth interviews Data from NSP monitoring system Semi-structured KIIs

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
6 LEARNING					
6	What key lessons can be learnt to the benefit of the FC or other NSPs in achieving their results?	<ul style="list-style-type: none"> The NSP's generation of important lessons for other NSPs 	<ul style="list-style-type: none"> The NSP will generate important lessons for other NSPs 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs Literature review
6.1	How was learning from this NSP shared with other NSPs (e.g. Mexico's NSP "Energy Efficiency in SMEs as a Contribution to a Low Carbon Economy") / projects, and did they make any changes to their approach as a result?	<ul style="list-style-type: none"> The presence of instances where the lessons from this NSP has changed the approach / results of other NSPs or projects 	<ul style="list-style-type: none"> The learning from this NSP is contributing to change the approach and results of other NSPs or projects 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs Literature review
6.2	How did the sharing of learning by other NSPs and other projects contribute to the successful implementation of the NSP?	<ul style="list-style-type: none"> The presence of instances where the lessons from other NSPs or other projects have resulted in the change of approach or results of this NSP 	<ul style="list-style-type: none"> The sharing of learning by other NSPs and other projects is contributing to the successful implementation of the NSP 	<ul style="list-style-type: none"> Direct beneficiaries NSP Team TSU Independent verifiers 	<ul style="list-style-type: none"> Progress reports In-depth interviews Semi-structured KIIs Literature review

Annex C Evidence and answers to the ELE matrix

The following table has been part of the ELE analysis effort to link the answers to the ELEQs with the evidence from the ELE sources that underpins them. The strength of the evidence is assessed following the methodology explained in Section 2 and the legend in Table 3. The codes found in the answers' text are the references to the specific sources (interviews, workshops, documents). Each code refers to a specific source and follows this legend: NT = NSP Team; NS = NSP Stakeholder; TP = Third Party; AR19 = Annual Report 2019; SAR20 = Semi-Annual Report 2020.

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
1 RELEVANCE					
1	To what extent does the NSP address an identified need (by national government, SMEs and project developers)?	<ul style="list-style-type: none"> The NSP design responds to the beneficiaries' needs and strategic priorities at the time of adoption; and still continues to respond to priorities given the evolving challenges and priorities in the Chilean energy market context. NSP is aligned with the needs of energy authorities, SMEs and energy project developers. 	<ul style="list-style-type: none"> The Technical Component of the NSP will address existing SSRE barriers particularly in human capacities and awareness with its planned activities. The Technical Component of the NSP will advise the government so that regulatory barriers to foster the development of SSRE projects can be addressed 	<ul style="list-style-type: none"> The NSP is aligned with government priorities in regards to GHG emission reductions for the energy sector, since increasing participation of RE is part of the national sustainable development agenda [Very strong evidence - NT1E, NT3E, NT5E, NT6E, NT7E, NS18E, TP20E, TP26E, PR14E, SAR17E, AR17E, SAR19E, SAR20E]. The MoE has been in permanent communication with GIZ through periodic meetings where MoE requested support from Technical Component in terms of technical assistance to complement their own efforts for advancing public policy for the promotion of SSRE [Very strong evidence - NT1E, NT2E, NT3E, NT5E, NT6E, NT7E, NT9E, TP20E, TP26E, NS14E, PR14E, AR17E, AR19E, SAR20E]. However, a couple of stakeholders disputed this opinion and mentioned that it was less clear how involved the MoE has been in the strategic planning/steering of the Technical Component [Weak evidence - NT3F, NT6E]. For instance, one source felt the project may not be very high in the government's political priority [Single source - NT3F]. There is evidence that this lack of high-level political buy-in was one of the causes of the delays in launching the Financial Component and the consequent incomplete implementation of the NSP [Strong evidence - NT1F, NT3F, NT6F, NT8F, TP22F, TP23F, TP25F, TP30F, PR14F, SAR18F, AR18F, M&E19F]. There is ample evidence that the SSRE market in the past 5 years has been booming. The reform to the net metering law, where the NSP contributed with technical analysis, has provided a huge push to this market in recent years [Very strong evidence - NT1I, NT4I, NT9I, NS12I, NS14I, NS15I, 	<ul style="list-style-type: none"> Annual Report 2019 p. 8 Annual Report 2019 p.25

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>NS17I, TP22I, TP23I, TP24I, TP25I, TP27I, TP30I, AR18I, AR19I]. However, lack of awareness, technical capacity, and access to finance have been widely cited as remaining key gaps for end-users, which shows that the NSP is addressing relevant needs of this stakeholder group [Very strong evidence - NT1I, NT3I, NT4I, NT7I, NT9I, NS13I, NS14I, NS16I, NS17I, NS18I, TP20I, TP22I, TP23I, TP24I, PR14I, SAR18I, AR18I, SAR19I, AR19I, SAR20I]. There is some evidence also that the NSP has been able to provide the required flexibility to adapt to the market needs as they evolved [Medium evidence - NT1I, NT3I, NT4I]. For instance: in 2015 a baseline study was carried to define priority sectors which were more interesting for the NSP to get involved; some sectors (e.g., wine industry) were not prioritised initially, but later on, when they proved to have high potential for SSRE projects, the NSP supported them; and every year there has been a planning instance between DSE and GIZ to agree on the annual priorities for the Technical Component.</p> <ul style="list-style-type: none"> ▪ Financing is a big barrier for end-users; therefore, the delay of the Financial Component made the NSP less relevant to them. [Very strong evidence - NT1J, NT6J, NT8J, NT9J, NS12J, NS16J, TP21J, TP22J, TP25J, TP29J, SAR18J, SAR19J]. There is some evidence that there has been some reputation impact on the NSP since the Financial Component was announced, but postponed several times [Medium evidence - NT1J, TP22J]. It has been also mentioned that perhaps the NSP team could have adjusted the plan or linked with other financial support initiatives if they knew earlier that the Financial Component was not going to come in place earlier [Single source - NT1J]. ▪ In hindsight, the Technical Support should probably have also targeted companies that have direct contact with public agencies, rather than associations. And not only medium and big but also smaller companies too [Single source - NT4J]. ▪ The SSRE segment (i.e. commercial in type and up to 300 kW) seems to be very important for the interviewed implementers, covering the majority of their business for most of them. Therefore, activities and products developed by the NSP have been highly valued by this stakeholders group, since they attack the main barriers that need to be overcome by improving technical capacities of implementers, users and financial institutions, educating banks and end users that are not always aware of the savings and other benefits from implementing SSRE projects and 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>supporting the creation of a project pipeline [Very strong evidence - NT1G, NT3G, NT4G, NT5G, NT6G, NT9G, NS12G, NS14G, NS15G, NS16G, TP19G, TP20G, TP23G, TP24G, TP27G, TP29G, TP30G, PR14G, AR17G, SAR18G, SAR19G, AR19G, SAR20G, M&E19G].</p> <ul style="list-style-type: none"> ▪ The NSP also provided technical support to the discussions around policy reforms that have been beneficial for the expansion of the market for implementers [Very strong evidence - NT1G, NT4G, NS12G, NS14G, TP23G, TP29G] ▪ The NSP's initial focus on PV and electricity generation from RE deviated attention from other segments, such as thermal applications, that started to show to have high potential as the NSP advanced. For instance, heat pumps and biomass have appeared as a very promising market for SSRE, in addition to PV where most of the efforts were focused at the beginning of the NSP [Very strong evidence - NT1H, NT5H, NT8H, NS12H, NS13H, TP20H, TP25H, TP29H, SAR18H, AR18H]. Nevertheless, the Technical Component has then corrected their focus to cover many of the non-PV SSRE technologies in their activities, with good results [Very strong evidence - NT1G, NT3G, NT4G, NT7G, NT8G, NS12G, NS14G, NS15G, NS16G, TP19G, TP20G, TP22G, SAR20G]. ▪ The ELE confirmed that financing is an important barrier for implementers, therefore the delay of the Financial Component made the NSP less relevant to them [Strong evidence – NT1H, NTH6, NT8H, NT9H, NS12H, NS16H, TP21H, TP22H, TP25H, TP29H, SAR18H, SA19H]. However, even if today there are more financial incentives for RE, the need from SMEs to access finance to develop SSRE projects still appears to be clear [Very strong evidence - NS11H, NS13H, NS15H, NS16H, TP22H, TP23H, PR14H, AR19H - disputed by TP25V]. 	
1.1	How well does the NSP align with government and agency priorities in regard to GHG emissions from the energy sector?	<ul style="list-style-type: none"> ▪ The project is in line with Government targets on environmental emissions (incl. NDC, sectorial plans, etc.) 	<ul style="list-style-type: none"> ▪ Chile SSRE NSP will support Chile's overall climate and energy strategy 	<ul style="list-style-type: none"> ▪ The NSP is aligned with government priorities in regards to GHG emission reductions for the energy sector, since increasing participation of RE is part of the national sustainable development agenda [Very strong evidence - NT1E, NT3E, NT5E, NT6E, NT7E, NS18E, TP20E, TP26E, PR14E, SAR17E, AR17E, SAR19E, SAR20E]. In 2017, the Chilean government launched the new national action plan against climate change (PANCC – Plan de Acción Nacional de Cambio Climático 2017 – 2022). The PANCC forms part of the Chilean Nationally Determined Contributions (NDC). ▪ SSRE projects are seen as an important factor to contribute to decarbonising the energy mix in Chile [Very strong evidence - NT3K, NT4K, 	<ul style="list-style-type: none"> ▪ Annual Report 2017 ▪ Semi-Annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>NT5K, NT6K, NT7K, NT9K, NS14K, NS18AD, TP19AD, TP20K, TP26AD, TP30AD - Average 3.30 out of 4 - SAR17K, AR17K, AR18K, AR19K, SAR20K - Disputed by Single source - NT7AA]. Also, the clear national commitment to addressing climate change gives certainty to the private market [and investors] [Single source - TP26K]</p> <p>■ In 2018, a new governmental guideline, known as “Ruta Energética” – “Energy Roadmap” was released. Its 4th axis addresses “Low emission energy” and has a direct and substantial relevance to the NSP, as it postulates a 400% increase on SSRE projects under 300 kW by 2022. In addition, Chile was the first LAC country to submit the revised NDC on 9th April 2020, confirming the goal of carbon neutrality by 2050 and more ambitious (unconditional) targets than the original version. Moreover, in April 2020 the Ministry of Energy (MoE) and the Sustainable Energy Agency (Agencia de Sostenibilidad Energética - ASE) launched the program: “Ponle Energía a tu Pyme” (Put Energy into your SME), which confirms that the promotion of SSRE is a public policy priority.</p>	
1.2 (Proposed by ELE team)	Did changes in the NSP-operating context affect the relevance of the project?	<ul style="list-style-type: none"> ■ The project’s goals and specific objectives and needs are still valid. ■ Several assumptions and causal pathways outlined in the TOC remain valid, after adaptations and refinements 	<ul style="list-style-type: none"> ■ Chile SSRE NSP’s efforts are long-term national priorities that are not affected by short-term context changes (e.g. local and general elections, changes in personnel, COVID-19, lower energy prices) 	<ul style="list-style-type: none"> ■ The ELE can confirm that the national policy agenda has increased the relevance of the NSP because the promotion of renewable energies in general is one of the main pillars of the sustainable development plan of the country (e.g. Energía 2050, COP25 Presidency) [Strong evidence - NT9K, TP23K, TP26K, AR17K, AR19K]. ■ Growth in RE generation [Very strong evidence - NT9K, NS12K, NS18K, TP19K, TP22, TP25K, TP29K, AR17K, AR19K], particularly large scale, coupled with decrease of PV prices and increase in their quality and efficiency [Medium evidence - NT1K, NS18K] have grown the interest in SSRE because of the lower risk perception from switching to RE technologies. Nevertheless, there is an evident need for technical and financial support in order to strengthen the market and increase long term sustainability. [Very strong evidence - NT1K, NT3K, NT6K, NT9K, NS15K, NS18K, TP19K, TP22K, TP27K, TP28K, TP29K, AR17K, AR19K]. ■ Also, banks observe that the clients are more interested in incorporating RE in their operations and it is clear that some projects result in economic savings, which are a key incentive for investments [Weak evidence - TP24K, TP27K]. In addition, growing environmental and climate awareness at SMEs is now incorporated more frequently into their priorities, and not just from a cost reduction perspective. 	<ul style="list-style-type: none"> ■ Annual Report 2017 ■ Semi-Annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<ul style="list-style-type: none"> There is also strong evidence that the increased awareness on SSRE benefits and variety has started to open a market niche for non-PV SSRE technologies [Strong evidence - NT6K, SAR18K, TP19K, TP29K]. This can be also be linked to the fact that the ESCO market has also grown in quality and quantity [Strong evidence - NT9K, TP22K, TP27K, TP29K]. From the ELE is possible to say that there is very strong evidence that interviewees believe that SSRE will be a central solution for green economic recovery after COVID-19 and the social unrest and therefore the existence of the NSP is particularly relevant under these circumstances. The economy is slowly recovering, and there are expectations that companies will look into new sustainability projects again soon [Very strong evidence - NT2K, NT6K, NS11K, NS13K, NS15K, NS18K, TP25K, TP28K]. Indeed, contrary to what someone would expect, the number of applications to SSRE funding and installation of SSRE projects have remained high throughout 2020 [Very strong evidence - NT4K, NT5K, NS15K, TP21K, TP22K, TP25K], and today, there are many end-users who want to install even large size RE [Strong evidence - NS18K, TP21K, TP25K]. COVID-19 + Civil unrest resulted in cancelling some of the NSP activities on the ground and adaptations had to be made in order to maintain as much as possible the objectives and plans for the year [Very strong evidence - NT1L, NT4L, NT5L, NT6L, NT9L, NS11L, NS13L, NS16L, TP19L, TP22L, SAR20L]. Also, because of COVID-19 and civil unrest, some companies might postpone green investments since the short-term priority will be to maintain business alive. This can be a threat for the successful Financial Component implementation [Very strong evidence - NT4L, NT9L, NS11L, NS13L, NS15L, NS16L, TP19L, TP22L, SAR20L]. In addition, plummeting of spot market electricity prices and high economic return expectation of the Chilean market can affect the relevance of the Financial Component also [Very strong evidence - NT1L, NT6L, NT7L, NS11L, NS15L, TP19L, AR16L, SAR17L, AR17L, SAR18L, AR18L, AR19L]. 	
2 EFFECTIVENESS					
2	To what extent has the implementation of the NSP been achieving	<ul style="list-style-type: none"> The degree to which there are evidence of the expected results / Interim Outcomes in the ToC: 	<ul style="list-style-type: none"> Technical Component activities will increase demand as well as the supply of SSRE projects. The Technical Component will 	<ul style="list-style-type: none"> Int. Outcome 1: Awareness of the potential of SSRE projects among end-user stakeholders increased Strengths: <ul style="list-style-type: none"> The Technical Component has worked extensively to raise awareness of 	<ul style="list-style-type: none"> Semi-Annual report 2020 M&E Plan 2019

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
	intended outcomes in the short, medium, and long term?	<ul style="list-style-type: none"> Public and private finance for SSRE leveraged Awareness of the potential of SSRE projects among potential end-user stakeholders increased The number of private companies that implement SSRE projects is increased SSRE end-users apply for financing subsidies of (pre-) feasibility studies Functioning MRV (Monitoring, Reporting and Verification) system for SSRE is in place The strength of the NSP contribution to the realisation of those outcomes (see link between outputs and outcomes) For each of the outcomes consider the major constraints and opportunities experienced (success and hindering factors) 	support to create a project pipeline of potential SSRE projects. Increased demand and supply are effective and essential aspects for a further development of the SSRE market in Chile.	<p>the different SSRE options and benefits (e.g. best practice examples, guidelines for SSRE PV systems and biomass boilers, PV, biomass and heat pump price indexes, study on normative requirements for energy storage, heat pump market analysis, study tour in Germany, videos, flyers, regulation map, solar thermal market study, good-practice site-visits) [Very strong evidence - NT1M, NT3M, NT4M, NT7M, NT8M, NS12M, NS14M, NS15M, NS16M, TP19M, TP20M, TP22M, SAR17M, AR17M, SAR18M, AR18M, SAR19M, AR19M, SAR20M]</p> <ul style="list-style-type: none"> The ELE found evidence that awareness levels in key national stakeholders have increased as direct contribution of the Technical Component [Very strong evidence - NT1M, NS14M, TP19M, TP22M, AR17M, SAR20M, M&E19M (Outcome Indicator 1)] The ELE was reported high appreciations from users of both awareness events and material [Very strong evidence - NT4M, NT7M, NS13M, NS14M, NS15M, TP19M, TP22M, SAR20M] Heat pumps and biomass have appeared as a very promising market for SSRE, in addition to PV where most of the efforts were focused at the beginning of the NSP [Very strong evidence - NT1M, NS13M, TP20M, TP25N, AR19M, AR17M] <p>Weaknesses:</p> <ul style="list-style-type: none"> Some important stakeholders interviewed appears not to have been targeted by awareness activities (e.g. ACERA, Acesol, ANESCO, CAMCHAL), although some of their associates have been [Medium evidence - TP19N, TP23N, TP30N] There is limited evidence that the informative online platform on SSRE (autoconsumo.minenergia.cl) has not been seen by key stakeholders [Weak evidence - NS15N, NS16N] The ELE received contrasting views on the accuracy of the prices on the PV Price Indexes: someone said they are lower than the actual ones [Single source - TP21N], while others said they are actually higher than those on the market [Medium evidence - NT8N, NS15N] <p>▪ <u>Int. Outcome 2: The number of private companies that implement SSRE projects is increased</u></p> <p>Strengths</p> <ul style="list-style-type: none"> Technical Component has provided a number of support tools (e.g. SSRE market price index updates, technical studies of SSRE techs), direct 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>assistance (helpdesk, online information platform, project appraisals) and capacity building to both end-users and project implementers [Very strong evidence - NT1M, NT4M, NT7M, NT9O, NS12M, NS14M, NS15M & NS15O, NS16M, NS18O, TP19M, TP20M & TP20O, TP21O, TP22M, TP23O, SAR17M & SAR17O, AR17M & AR17O, SAR18M, AR18M & AR18O, SAR19M & SAR19O, AR19M, SAR20M & SAR20O]</p> <ul style="list-style-type: none"> • Interviews confirmed the tools, assistance and capacity building were helpful and their knowledge is being used by project implementers [Very strong evidence - NT7O, NT9O, NS15O, TP20O, TP21O] • Interviews generally confirm that the Technical Component has been laying the ground to the strengthening of both demand and supply of SSRE [Strong evidence - NT1O, NT7O, TP20O, TP23O] [see also question on contribution of NSP in strengthening the market] • The reform to the Net Billing law [supported by the NSP] has provided a huge push to this market in recent years (after 2018) [Very strong evidence - NT1O, NS12O, NS14O, TP20O]. <p>Weaknesses</p> <ul style="list-style-type: none"> • However, despite the support provided by the Technical Component to the government, there is some evidence that the regulatory framework still needs to be improved to further enable the strengthening of the SSRE market [Medium evidence - NS15P, TP19O]. For example, SSRE implementers are waiting for the new regulation to harmonise the thresholds for the energy customers who are regulated or unregulated, with those for the Net Billing law. [Single source - NS15P]. Moreover, in the current regulatory framework, the distribution companies have no incentives to contribute with the connection of SSRE projects, as they prefer to sell grid electricity. [Single source - TP19P] <p>▪ <u>Int. Outcome 3: SSRE end-users apply for financing subsidies of (pre-) feasibility studies</u></p> <ul style="list-style-type: none"> • The main contribution of the Technical Component to this int. outcome are the preparation of a indicative project pipeline and project appraisal studies (e.g. 8 pre-feasibility studies conducted by “Biogas development in the dairy industry”) [Strong evidence - NT3Q, NT9Q, NS16Q, SAR17Q, AR18Q, SAR19Q]. • However, the achievement of the Intermediate Outcome has been almost entirely left to the Financial Component implementation 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>[Medium evidence - NT4R, AR19R, SAR19R, M&E19R]. Indeed, the relationship between the increased number of SSRE projects in the country cannot be directly linked to the NSP implementation or at least there is no clear evidence of that [Medium evidence - SAR19R, AR19R, M&E19R]. An example that shows the impacts of the Financial Component delays on the Technical Component and NSP as a whole, in terms of an important missed opportunity (and loss of NSP reputation) is the missed financial support to the biogas projects supported by UNIDO. The Technical Component took contact with the UNIDO Biogas project team and they were very interested in the Financial Component support, for instance to provide the initial capital of the supported SSRE projects. Unfortunately, the project finished in August 2019 and the Financial Component had not materialised. In the future, the NSP will have lost reputation and to get the end-users back might take more effort, because they will remember that last time what was promised did not happened [Single source - TP22R].</p> <ul style="list-style-type: none"> • The Technical Component seems not to have looked at alternative sources of financial support for the NSP beneficiaries, although the NSP Team disputes that view [Strong evidence - NT4R, NT10R, TP22R - disputed by Weak evidence - NT3Q, NT6Q]. For example, in the NSP Annual Report 2017, it is reported that the Technical Component collaborated with the German-Chilean Chamber of Commerce and Industry (CAMCHAL), which as part of the BMUB funded IKI Project “Smart Energy Concepts”, manages an open call for proposal for the co-financing of pre-feasibility studies for energy efficiency and renewable energy projects in the Chilean agriculture sector [Single source - AR17Q]. • There appear to be three main reasons for the Technical Component has not been able to push effectively for alternative financial mechanisms: 1) the multiple postponements of the Financial Component starting, which was always seen by the Technical Component as coming soon [Medium evidence - NT6Q, NT1R, NT4R]; 2) lack of actual financial incentives on the market (current incentives are only recent) [Strong evidence - NT6Q & NT6R, NT9R, TP20Q, SAR20Q & SAR20R]; and finally (3) the presence of clear restrictions from the TSU that the Technical Component is to support projects funded by the Financial Component only [Medium evidence - NT6Q, NS11R]. • In hindsight, not having looked for a “plan B” to the Financial Component can be seen as a missed opportunity for the NSP, because 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>the support provided to SMEs has been incomplete, and it could have increased its effectiveness [Very strong evidence - NT4R, NT10R, NS11R, TP20R, TP22R, TP23R, TP25R, SAR19R, AR19R]</p> <ul style="list-style-type: none"> • In addition, there is evidence from the interviews that the Financial Component instruments were not widely publicised by the Technical Component [Strong evidence - NS13R, NS15R, TP21R, TP24R]. <p>▪ <u>Int. Outcome 4: A functioning MRV (Monitoring, Reporting and Verification) system for SSRE is in place</u></p> <p>Strengths:</p> <ul style="list-style-type: none"> • The MoE has been closely involved by GIZ in the MRV system development [Weak evidence - NT6S, NT7S] and it was very satisfied with the SSRE MRV system developed by the Technical Component, and the large-scale RE system they additionally requested [unexpected outcome] [Strong evidence - NT7S, TP20S, TP26S, AR18S, M&E19S]. In fact, before the NSP, there was no MRV of RE NAMAs in Chile, so this has been a very important achievement of the NSP [Strong evidence - NT7S, TP26S, AR18S]. • The Technical Component appears to have put in place an appropriate framework for the Ministry of Energy to own and operate the RE MRV systems [Single source - NT4S]. • Positively, the Ministry and GIZ have applied the MRV system on many current and past RE projects. This made the MRV platform a key market monitoring product that was produced by the NSP [Strong evidence - NT1S, NT7S, TP26S, SAR20S, M&E19S] • The MRV system developed is in line with the national one managed by the MMA [Strong evidence - NT4S, NT7S, TP26S] <p>Weaknesses:</p> <ul style="list-style-type: none"> • There is relevant reporting that, despite being very useful and comprehensive, the MRV tool is complex and it could have been made more user-friendly [Weak evidence - NT7T, NT8S]. • A challenge in operating the RE MRV systems by the MoE will be the coordination with the Ministry of Environment (MMA), including at the indicator level (i.e. by harmonising indicators of various MRV levels to avoid duplication of efforts) [Strong evidence - NT7T, TP22T, TP26T]. In fact, it appears that the MMA has not been sufficiently involved by the Technical Component in the MRV development (2.5 rating out of 4). 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>[Medium evidence - TP26T, NT7S].</p> <ul style="list-style-type: none"> The MoE and MMA are still discussing their roles and responsibilities in the national MRV system for RE/SSRE NAMAs. In fairness, the whole national MRV governance is still under definition and the MMA is discussing with fifteen line ministries about their roles. To explain, Chile has a good GHG inventory system, but it still does not have a national MRV system for mitigation actions (NAMAs) [Single source - Strong evidence - NT7S, TP26S & TP26T, AR18S]. <p>▪ Effectiveness of the Financial Component strategy:</p> <ul style="list-style-type: none"> There seem to be a clear need from SMEs to access finance to develop SSRE projects [Very strong evidence - NS11U, NS13U, NS15U & NS15V, NS16U, TP23U, TP22V, PR14V, AR19V - disputed by TP25V] From the interviews' evidence, the Financial Component strategy appears to be adequate to address the barriers to access finance for SSRE [Very strong evidence - NT5U, NT6U, NS11U, NS15U, NS16U, TP21U, TP23U, TP24U, TP27U, TP29U, TP22V, PR14V]. However, it is early to forecast how effective the Financial Component will be to deliver its intended outcomes. The ELE has identified some key success factors for the Financial Component: <ul style="list-style-type: none"> The continuation of technical backstopping to the Financial Component, to build a strong pipeline of bankable projects and take care of their technical feasibility assessment [Strong evidence - TP24U & TP24V, TP25U, TP27U & TP27V, NT1V, NT9V, NT10V, TP20V, NT8U]. ASE appears to be the natural candidate to continue that (e.g. ASE has a technical validation platform for RE projects that offers support to Banco Estado for now, but it is open to make it available for more banks) [Medium evidence - TP25U, NT1V]. [Example of need of TA to accompany the Financial Component] In the process for accessing "Crédito Verde" (CORFO), banks are responsible for obtaining technical information from the clients. According to sources from private banking, this has been an important barrier for banks to use the scheme so far. Therefore, there is need for CORFO to streamline the process of technical validation, so that it does not fall on the private banks, which do not have the appropriate technical capacity [Single source - TP27V]. An important risk for successfully adding technical assistance to the Financial Component is that, currently, ASE does not seem to have neither professionals nor a budget specifically set aside to support the 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>NSP, and it could take a long time before ASE can provide real assistance to the NSP [Medium evidence - TP25V, NT6V].</p> <ul style="list-style-type: none"> - Appropriateness of the content and delivery of the capacity building to FIs will be crucial to the success of the Financial Component, as the banking sector is currently lacking the adequate capacity and it is treating SSRE projects as any other commodity, while the market requires tailored mechanisms (see next point) [Strong evidence - NT4U, TP19U & TP19V, TP20U, TP23U, TP24U & TP24V, TP29U, NT4V, TP27V, PR14V, NT8U] - Appropriateness of the Financial Component's financing mechanisms to the SSRE market, both the direct ones provided by the Financial Component and the ones developed thanks to the guarantee fund (e.g. simplicity of the access process, low interest rates, long-term repayment scheme) [Very strong evidence - TP19U & TP19V, TP23U, TP24U, NT4V, NT5V, NS15V, TP20V, TP27V, TP29V, PR14V] - Coordination and complementarity of activities between CORFO & MoE, with FIs, and other initiatives on renewable energy (e.g. by Banco Estado, CNR, ASE, CAMCHAL) [Very strong evidence - NT5U, NT6U, NS12U, TP20U, TP21U, TP23U, TP25U, AR17U, SAR20U, NT1V, NT10V, NT8U]. On this, there is indeed evidence showing that the NSP Technical Component has worked to a certain extent in coordination with other existing public funding for RE (e.g. Banco Estado, CNR, ASE) [Strong evidence - NT6U, TP20U, TP23U, TP24U, TP25U, TP27U]. To flag that coordinate with other initiatives might take substantial effort to the Financial Component team as there is limited evidence that there has not been an overarching plan from Chilean government to coordinate the different parallel RE-supporting initiatives [Single source - NT1V]. - Internalisation of externalities, i.e. making sure that the Financial Component is flexible enough to adapt its strategy according to the changing context (e.g. due to COVID-19, civil unrest, electricity prices fluctuations, etc.) [Very strong evidence - NT5U, NT10V, NS16V, TP19V, AR18V] - Find its own market niche, e.g. supporting thermal applications of SSREs, rather than PV projects [Strong evidence - TP25U, AR17U, NT5V], or hydrogen [Single source NT3V]. On hydrogen, one respondent strongly suggested for the NSP not to look at supporting hydrogen uptake, explaining that hydrogen projects need larger scales and, since the market is in its infancy, it would require a big effort to set up, which 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>could easily make the NSP lose its focus and effectiveness [Single source - NT8V].</p> <ul style="list-style-type: none"> - Inclusion of project assessment criteria on environmental, social and financial viability, together with technical feasibility in the Financial Component-sponsored Feasibility Studies [Single source - TP24U] • Having CORFO on the Financial Component team can add value to the NSP, because it can capitalise from its prior experience in operating financial mechanisms for SMEs [Single source - NT5U]. For example, CORFO has been providing financial guarantee to Banco Estado, which is one of the likely partners for the Financial Component [Single source - TP24V]. Indeed, the ELE was reported that, from a bank's point of view, guarantee funds are helpful because their investment risk is reduced, therefore they can provide more loans than without the guarantee [Single source - TP27U]. • Other suggestions received to make the Financial Component instruments aligned with the SSRE market needs are: (i) Providing specific financial instruments to facilitate the uptake of the ESCO model [Medium evidence - TP23V, TP29U & TP29V], for example by applying financial guarantees to the economic savings resulting from the ESCO model. As ESCOs basically sell "savings", if the savings can be guaranteed for the client, that could be more attractive for their business model [Single source - TP29U]. (ii) Connecting the SSRE loans with property mortgages (e.g. like the PACE scheme in the USA) could be a good model, which has not been widely implemented in Latin America yet [Single source - TP19U]. (iii) For small and medium projects, there may be less of a need of financing pre-feasibility studies by the Financial Component, particularly when technology providers act as intermediaries and develop the technical and economic assessment within their services [Single source - TP24V]. (iv) Address the possible issue for the long-term sustainability of SSRE projects about their maintenance in rural areas [Weak evidence - TP21V, TP30V]. For example, although CNR produced a list of technicians that can maintain the SSRE projects (https://www.cnr.gob.cl/temas-transversales/energias-renovables-en-riego/riego-fotovoltaico/), it found that those technicians can be very far from rural SMEs and it could be a problem to get timely maintenance services (especially now in COVID-19). Especially in the north part of Chile, there are very few installers of solar irrigation projects [Single source - TP21V]. 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<ul style="list-style-type: none"> The ELE was reported that there was a drop in the involvement of GIZ by the MoE in the discussions about the Financial Component planning once the Technical Component did not get the extension. This could be because it was envisioned that anyway GIZ was not going to be around for the Financial Component implementation. For example, GIZ was not informed that the MoE is launching an incentive for residential SSRE, which is very relevant to the NSP [Single source - NT1V]. In terms of the Financial Component governance for its implementation, there could be some potential coordination challenges. For instance, the ELE was told that while the MoE wants to advance quickly to provide Financial Component subsidies in 2020, CORFO might not be able to proceed so fast (at least not with its sub-components). So, there could be some challenges there, in that you might have two different expectations on the Financial Component implementation timeframe [Single source - NT10V]. 	
2.1	For each output, what were the major constraints and opportunities experienced in implementing the activities? For each output, what were the particular features of the project and context that made a difference in achieving these outputs?	<ul style="list-style-type: none"> Evidence of the delivery of intended outputs The strength of the NSP contribution to the delivery of those outcomes For each of the output consider the major constraints and opportunities experienced (success and hindering factors) 	<ul style="list-style-type: none"> Implementing the intended activities (as per ToC) will deliver the expected outputs The NSP is the main factor in the delivery of the outputs 	<ul style="list-style-type: none"> See answer to ELEQ 2 	<ul style="list-style-type: none"> Annual report 2017, 2018 and 2019 Semi-annual report 2020
2.2 (Proposed by ELE team)	Are results that are reported for the five mandatory core	<ul style="list-style-type: none"> Level of achievement of M1-M5 targets by the project 	<ul style="list-style-type: none"> The NSP will support the achievement of NAMA Facility's core indicators 	<ul style="list-style-type: none"> M1 – Reduced GHG emissions in [t CO2e]: Not in line with initial target (due to Financial Component delays) 	<ul style="list-style-type: none"> 2017, 2018 2019 M&E plans

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
	indicators by the NAMA Facility (M1-M5) in line with the NAMA Facility's M&E framework?	<ul style="list-style-type: none"> ▪ Circumstances (positive and negative) that influenced the performance on the M1-M5 indicators 		<ul style="list-style-type: none"> ▪ M2 – Number of people directly benefitting from NSPs: The NSP has exceeded the target of people directly benefitting by the NSP (target: 300; achieved in 2019: 748, of which 274 women and 474 men) ▪ M3 – Degree to which the supported activities are likely to catalyse impacts beyond the NSP (potential for scaling-up, replication and transformation): NSP implementation not in line with initial target (due to Financial Component delays) ▪ M4 – Public finance mobilised in [EUR]: No finance has been mobilised yet, so the NSP is not in line with initial target (due to Financial Component delays) ▪ M5 – Private finance mobilised in [EUR]: No finance has been mobilised yet, so the NSP is not in line with initial target (due to Financial Component delays) 	
2.3	Structure & steering: Has the NSP been managed, coordinated, and implemented effectively?	<ul style="list-style-type: none"> ▪ The chosen implementation mechanism is conducive to achieving the expected outcomes ▪ The technical component is tailor-made for achieving the planned outputs ▪ Communication and visibility are implemented according to an integrated approach ▪ Financial Component and Technical Component interact synergistically ▪ Stakeholders are participating and collaborating actively in the intervention 	<ul style="list-style-type: none"> ▪ SSRE NSP team has the right governance structure to effectively coordinate with key stakeholders ▪ Key stakeholders fully own and commit to their role in the NSP ▪ Technical Component and Financial Component run in parallel, coordinating with and sustaining each other's work and results 	<ul style="list-style-type: none"> ▪ The technical support and advisory service provided by GIZ was perceived as very professional and efficient [Strong evidence - NS11AE, NS12AE, NS13AE, NS14AE, NS15AE, NS18AE, TP21AE], rated as a 3,77 out of 4 (=excellent) from eleven interviewees. They provided support not only to their direct counterparts, but also to other government stakeholder (other departments within the MoE and other ministries) [Strong evidence & NT1AF, NT8AE, NS16AE]. The Technical Component products had a high participation share by the MoE and other stakeholders (high level teamwork) [Strong evidence - NT4AE, NT7AE, NT8AE, NS12AE, NS14AE, NS18AE]. Although, one source observed, that GIZ itself worked few on the actual products, but rather used external consultants [Single source - NT4AF]. Other sources noted that environmental and social aspects could have been covered more extensively by the Technical Component studies and capacity building activities [Medium evidence - NT5AF, TP26AF]. ▪ Permanent adjustment to the postponement of the Financial Component was done, NSP was frequently in touch with KfW to mitigate [Strong evidence - NT1AF, NT5AE, NT10AE, NS11AE]. However, there was observed a drop in the involvement of the Technical Component in the discussions relevant to the Financial Component once it didn't get the extension, which was perceived as a missed opportunity for the NSP not having the Financial Component [Strong evidence - NT1AF, TP22AF, NT9AF]. 	<ul style="list-style-type: none"> ▪ NSP Proposal ▪ Annual report 2017, 2018 and 2019 ▪ Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
2.4	Were there additional outputs and/or outcomes obtained that were not planned in project design (unintended outcomes)?	<ul style="list-style-type: none"> There is evidence of the NSP's contribution to unintended or unexpected results If there are positive unintended results, the NSP team has been able to capitalise on them to sustain the intended outcomes If there are negative unintended results, the NSP team has been able to appropriately identify, address and learn from them. 	<ul style="list-style-type: none"> The NSP management has been appropriately designed to identify, address / capitalise from, and learn from unintended outcomes 	<ul style="list-style-type: none"> The MoE was so satisfied with the SSRE MRV system developed by the Technical Component, that they requested an additional MRV system for large-scale RE [Strong evidence - NT7S, TP20S, TP26S, AR18S, M&E19S]. The MRV tool is not only used by the MoE, but also in other institutions (like for financing the RE in SME in the agriculture sector). It is also available in the social media channels of the government ("democratization" of the information collected). [Single source - NT7S]. In 2019, the Chile SSRE NSP participated in a workshop organised by the TSU in Bonn. Given the similarities of the objectives and target groups between this NSP in Chile and the NSP in Mexico "Energy Efficiency in SMEs as a Contribution to a Low Carbon Economy", the team from the Chile NSP shared some of their experiences and methodologies, particularly regarding the development of annual PV price indexes. This lesson was then taken up by the Mexico NSP, which in 2020 published their first PV price index and mentioned the PV price index of the Chilean NSP as one of the prime methodological resources [Single source - SAR20AQ]. 	<ul style="list-style-type: none"> Amendment request 22 august 2019 Annual report 2017 Semi-Annual Report 2020
2.5 (Proposed by ELE team)	Did changes in the NSP-operating context impacted (positively and/or negatively) on the effectiveness of the project? If so, to what extent (greatly, partially, negligibly)?	<ul style="list-style-type: none"> The level of NSP contribution to the achievement of the results compared to exogenous factors. Several assumptions and causal pathways outlined in the TOC remain valid, after adaptations and refinements 	<ul style="list-style-type: none"> The NSP is the main cause of the achievement of the intended and unintended outcomes 	<p>External factors creating a favourable context for the NSP:</p> <ul style="list-style-type: none"> Other SSRE-related projects and initiatives [Strong evidence - NT1W, NT6W, NT9W, TP28W, TP29W, AR17W]. For example, the NSP participated in the initiative "Gestiona tu energía", which initially was focused on energy efficiency, but the NSP was able to steer it towards SSRE as well [Single source - NT1W]. Also, the public bank BancoEstado introduced during 2017 a financing line for small renewable energy and energy efficiency projects [Single source - AR17W]. In addition, in April 2020, MoE and ASE launched the "Ponle Energía a tu Pyme" (Put Energy into your SME) programme [SAR20W]. Relevant projects with which the Technical Component has coordinated: GEF/UNIDO/Ministry of Energy: "Biogas development in the milk industry"; GEF/IADB/Ministry of Energy: "Promotion and Development of Local Solar Technologies in Chile"; BMU/IKI/AHK Chile/AhEE: "Smart Energy Concepts"; CTF/BID/WB: "Program for the Direct Uses of Geothermal Energy"; World Bank Group: "Partnership for Market Readiness – Chile" [Single source - AR18W]. Moreover, at the international level, initiatives such as the "green finance initiative" (e.g. green bonds) and global guarantee fund of the UK Government can be complementary to the NSP Financial Component [Single source - TP28W] 	<ul style="list-style-type: none"> Annual report 2017, 2018 and 2019 Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<ul style="list-style-type: none"> • The increase of number of SSRE implementers on the market [Medium evidence - TP29W, AR17W] • The regulatory framework has become more conducive of SSRE projects (see Net Billing Law change) [Strong evidence - TP29W, AR18W, AR19W] <p>External factors affecting the Technical Component / creating risks for the Financial Component implementation:</p> <ul style="list-style-type: none"> • Delays in the Financial Component implementation were reported as the main "external factor" to the Technical Component to have had a detrimental impact on its effectiveness [Very strong evidence - NT4X, NT8X, NT9X, NT10X, NS11X, TP22X, AR16X, SAR17X, SAR18X]. In fact, although many had been identified by the Technical Component, only 4 of those SSRE projects reached implementation, because of the lack of Financial Component. As an interviewee put it: "Because of that, the Technical Component could not seal the deal with the SSRE projects" [Very strong evidence - NT4X, NT8X, NT10X, NS11X, TP22X, SAR16X, AR16X, SAR17X, SAR18X, M&E19X]. • The delays in the Financial Component launch are creating serious risks to its own implementation. The most evident one is that the technical support void left by the Technical Component will need to be filled effectively and in a timely manner, which cannot be given as granted [Strong evidence - NT9X, NS11X, SAR18X, AR18X]. Furthermore, the awareness and technical products developed by the Technical Component have a relatively short durability due to the rapid change of market conditions and technical advancements. Therefore, many of the materials elaborated by the Technical Component might no longer be relevant to raise awareness among potential consumers by the time the mechanisms of the Financial Component become available [Weak evidence - NT6X, SAR20X]. In addition, the timing of the Financial Component start could be tricky because now numerous other government-sponsored RE initiatives appears to be on the market, which could diminish the value of the Financial Component financial instruments [Medium evidence - NT1X, TP25X]. • The reduction of electricity prices can represent a serious risk for the Financial Component [Very strong evidence - AR19W, NT1X, NS15X, TP19X, AR16X, SAR17X, AR17X]. Indeed, the decrease on PV costs could be translated in lower electricity prices, which could make SSRE less interesting for SMEs [Medium evidence - NT1X, AR16X, SAR17X, AR17X]. 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>This is particularly true in Chile, where today's SSRE market seems to be very competitive and price sensitive [Very strong evidence - NS15X, TP19X, SAR18X].</p> <ul style="list-style-type: none"> Staff turnover and institutional changes had an impact on the NSP's effectiveness [Very strong evidence - NT5X, NT6X, NT10X, NS11X, TP26X, AR16X, SAR18X, SAR19X], particularly by causing serious delays in the start of the Financial Component, as the Chilean government could not identify in a timely manner the institutional governance to channel the NAMA Facility's funds to implement the Financial Component [Very strong evidence - NT5X, NT6X, NT10X, NS11X, TP26X, AR16X]. Additionally, presidential elections caused some delays to the Technical Component implementation [Weak evidence - SAR18X, SAR19X], and the loss of ODA status of Chile made it impossible for the Technical Component to receive an extension beyond 2020 [Weak evidence - NT1X, SAR20X]. <p>Effects of COVID-19 (coupled with widespread civil unrest) on the Technical Component effectiveness:</p> <ul style="list-style-type: none"> For the Technical Component, several activities on the ground were suspended and big adaptations had to be made [Strong evidence - NT1X, NT9X, NS13X]. For instance, civil unrest seems to have contributed to the institutional delays within the national government that brought to the Financial Component delays [Single source - NT10X]. Moreover, other organisations supporting/implementing SSRE projects have been experiencing delays in their work because of COVID-19 & civil unrest [Strong evidence - NS12X, NS13X, TP21X] <p>Risks of COVID-19 (coupled with widespread civil unrest) to the Financial Component implementation:</p> <ul style="list-style-type: none"> COVID-19 and civil unrest can represent a serious risk for the Financial Component relevance and effectiveness as companies may postpone green investments, since their short-term priority will be to maintain their business alive [Very strong evidence - NT4X, NT5X, NT9X, NS11X, NS12X, NS13X, NS15X, NS16X, TP19X, TP22X, SAR20X]. However, contrary to what someone would expect, the number of applications to SSRE funding and installation of SSRE projects have remained high throughout 2020 [Very strong evidence - NT4W, NT5W & NT5X, TP25W, NS15X, TP21X, TP22X] (already said in relevance). 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<ul style="list-style-type: none"> There is a good opportunity for the Financial Component to demonstrate its complementarity with the government's strategy for a "green" COVID-19 recovery and increase its impact nationally [Strong evidence - NS11W, TP19W, TP20W, TP27W, TP28W] 	
2.6 (Proposed by ELE team)	Has the NSP M&E framework been able to adequately function?	<ul style="list-style-type: none"> The proposed NSP M&E framework adequately reflects the challenges, outcomes and impacts of the program The logical framework is used as reference tool for monitoring (regularly updated) 	<ul style="list-style-type: none"> The M&E is setup and implemented based on KPI The logframe is regularly updated and used as a learning tool 	<ul style="list-style-type: none"> The interviews revealed, that different divisions, departments and agency linked to the MoE (e.g. the sustainable energy division or ASE) were not always aligned with common objectives and coordination/involvement was a challenge to the NSP (e.g. in regards to ensure the institutional knowledge supported by the Technical Component wasn't lost) [Medium evidence - NT1AF, TP25AF]. According to some interviewees, the MoE tried to deviate the work of the NSP according to their needs or towards the agenda of ASE, which not always were aligned with the NSP's original goals. E.g. at some point MoE tried to expand the scope of the NSP to include energy efficiency. [Medium evidence - NT1AF, TP25AF]. On the other hand, there was enough flexibility perceived, for the NSP to adapt well to the MoE's technical support needs [Strong evidence - NT2AE, NT10AE, NS16AE]. It is recommended that in order to get agreements that guarantee timely progress and coordination among all actors working in this matter, decision making should come from a higher-level body. For instance, to set up a high-level political committee in addition to the technical level one responsible for the coordination of day to day activities could be a way forward for the Financial Component implementation phase [Single source - NT6F]. 	<ul style="list-style-type: none"> Annual report 2017, 2018 and 2019 Semi-annual report 2020 M&E Plan 2019 Log-frame 2017
2.7 (Proposed by ELE team)	How has learning been integrated within the project?	<ul style="list-style-type: none"> The presence and effectiveness of institutionalised learning and adaptation mechanisms within the NSP 	<ul style="list-style-type: none"> The NSP team regularly identify learnings, reflect on them, and accordingly adapt the ToC and implementation of the project 	<ul style="list-style-type: none"> Trough the steering committee, regular planning to agree on the priorities for the year occurred, where learning integration was exercised [Strong evidence - NT1AE, NT2AE, NT3AE, NT4AE, NT5AE, NT6AE, NT7AE, TP28AE]. However, one single source [TP26AF] disputed, that not all relevant governmental key stakeholder participated in the steering committee. Although, there was permanent communication between the MoE, other members (e.g. KfW) and the NSP Technical Component team [Weak evidence - NT1AE, NT5AE], the communication and coordination strategy with ASE, MMA and other stakeholder (e.g. 	<ul style="list-style-type: none"> Annual report 2017, 2018 and 2019 Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				implementers associations) were perceived not very effective at times [Very strong evidence - NT1AF, NT10AF, NS13AF, TP23AF, TP25AF, TP26AF, TP30AF], e.g. in the communication of the Financial Component delays or the involvement of ASE and MMA. One source also noted the high staff turnover, which resulted in gaps between the change of leadership of the Technical Component [Single source - NT4AF].	
3 EFFICIENCY					
3	To what extent is the relationship between inputs and outputs timely and to expected quality standards?	<ul style="list-style-type: none"> Timeliness of the delivery of outputs and outcomes (incl. budget spending) If there are delays in the implementation, what have caused them (endogenous or exogenous factors) and how seriously have they impacted the NSP implementation? The effectiveness of the measures adopted to reduce the delays The level of satisfaction of the NSP direct beneficiaries 	<ul style="list-style-type: none"> Technical Component activities run smoothly, on time and on budget. Coordination with other projects of the Chilean government focusing on RE and using synergies with further projects (by development cooperation and Chilean government) within the renewable energy sector will add to the efficiency of the Technical Component. The cooperation with industry association will support an efficient information dissemination and stakeholder identification. 	<ul style="list-style-type: none"> The outputs (activities and products) elaborated by the NSP team, were characterized by very high timeliness, coordination, relevance, and quality and perceived as very professional [Very strong evidence - NT6AH, NT7AH, NT8AH, NS11AH, NS13AH, NS14AH, NS15AH, NS16AH, NS17AH, NS18AH, TP22AH, TP23AH, SAR18AH], and therefore rated with a 3,86 out of 4 (i.e. excellent) by eleven interviewees. The NSP team generally produced and delivered high quality and useful outputs and products [Very strong evidence - NT1AH, NT7AH, NT8AH, NS15AH, NS16AH, NS17AH, TP21AH, TP25AH, TP26AH, PR14AH, AR18AH]. All interactions between GIZ as delivery partner of the NSP and the NAMA Facility TSU went very smoothly [Medium evidence - NS11AH, PR14AH]. However, the delays in the Financial Component as well as the late start of the Technical Component affected the optimal implementation of the Technical Component [Medium evidence - NT1AI, NT6AI, AR18AI, M&E19AI]. 	<ul style="list-style-type: none"> Amendment requests Annual report 2017, 2018 and 2019 Semi-annual report 2020
4 IMPACT					
4	What early evidence is there that the NSP is likely to contribute to the intended impact in the ToC (incl. transformational	<ul style="list-style-type: none"> The strength of the evidence that key outcomes are going to be achieved and the robustness of the causal links / pathways to the intended impact (namely increase in demand of SSRE projects, supply of 	<ul style="list-style-type: none"> Direct: Technical Component activities will be a key to support the determination of a pipeline of potential SSRE projects that will eventually replace fossil fuels when completed. 	<ul style="list-style-type: none"> According to the ELE evidence, the SSRE sector will be important to the decarbonisation of Chile's energy mix in the next 10-15 years [Very strong evidence - NT4AA, NT3AD, NT5Z, NS14AD, NS18AD, TP19AD & TP19X, TP20AD & TP20Z, TP26AD, TP30AD - Average 3.30 out of 4 - Disputed by Single source - NT7AA]. Unfortunately, because of the lack of Financial Component, at this point, no additional SSRE installed capacity (with the exception of four small projects supported by the helpdesk) is attributable to the NSP. Therefore, there is no evidence yet that there is a direct link between the Technical 	<ul style="list-style-type: none"> Amendment requests Annual report 2017, 2018 and 2019 Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
	change), as well as any unintended or unexpected ones?	<p>SSRE technologies and GHG emissions reduction and co-benefits)</p> <ul style="list-style-type: none"> ▪ The extent of how transformative the NSP is likely to be based on current evidence 	<ul style="list-style-type: none"> ▪ Indirect: Technical Component initiatives will build mitigative capacity in Chile and the build-up of institutional capacities to undertake a larger number of projects in the future. 	<p>Component and new SSRE projects in Chile. [Medium evidence - NT4Z, NT5AA, NT6AA, NT8AA, NT9AA, NT10AA, SAR18AA, AR18AA, AR19AA, SAR19AA, SAR20AA, M&E19R]. Also the financial incentives for renewables currently on the Chilean market (e.g. "Ponle energía a tu PYME", "Crédito Verde", "Casa Solar") appear not to be linked to the Technical Component activities, or at least not directly [Strong evidence - NT6AA, NT8AA, TP25AA].</p> <ul style="list-style-type: none"> • However, there is evidence that the NSP has contributed with key analysis and data that has accelerated different policy and market advancements [Very strong evidence - NT1Z, NT4Z, NT9Z, NS11Z, NS14Z, NS18Z, TP20Z, TP22Z, TP23Z, TP25Z, SAR20Z - disputed by Single source - TP19AA]. In general, even compared to other favourable external factors (e.g. national climate agenda, low PV prices), the contribution of the NSP to the strengthening of the SSRE market that has been witnessed in the past few years has been "somewhat important" [Very strong evidence - NT1AB, NT2AB, NT3AB, NT4AB, NT9Z, NT10AB, NS11AB, NS14Z, NS18AB & NS18Z, TP19AB, TP20Z, TP22AB, TP23AB & TP23Z, TP24AB, TP25AB & TP25Z, TP30AB - Average rating 3.13 out of 4]. In addition, one of the key merits of the Technical Component was not focussing only on solar PV, but also on more niches SSRE technologies [Weak evidence - NT3Z, NT5AA]. However, that diversification in the SSRE market has not been seen yet, and solar PV still dominates it [NT5AA, NS12AA, TP29AA]. ▪ In terms of awareness creation, capacity building and policy analysis there is evidence that the Technical Component contributed effectively to the needs of the Ministry of Energy, responsible for leading the strategic development of the sector. The NSP was important to set up the scope, enhancing knowledge exchange and putting the issue on the table. [Very strong evidence - NT1Z, NT3Z, NT4Z, NT10Z, NS11Z, NS14Z, NS18Z, TP20Z, TP22Z, SAR20Z]. Positively, the Technical Component's policy support to the government appears to have been demand-driven: for example, two regulatory issues were selected by the MoE every year and the NSP would provide technical assistance on them [Very strong evidence - NT1Z, NS18Z, TP20Z]. ▪ On the regulatory side, the reform to the Net Billing law has provided a huge push to this market in recent years (after 2018) [Very strong evidence - NT1Z, NT4Z, NS12Z, NS14O, NS18Z, TP20Z, TP23Z, TP29Z, TP30Z, AR18Z]. There is evidence that the Technical Component 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>contribution to the improvement of the Net Billing law was important [Very strong evidence - NT2AC, NT4AC & NT4Z, NS14AC & NS14O, NS18AC & NS18Z, TP20Z, TP23Z - Average rating 3.10 out of 4]. Nevertheless, there are still improvements needed to the regulatory framework to enable the right growth of the SSRE market [Very strong evidence - NT7AA, NS12AA, TP19AA, TP23AA, TP29AA, TP30AA].</p> <p>▪ Furthermore, while the Technical Component has had an impact in strengthening the SSRE market, the entire SSRE market context has changed substantially (e.g. higher economic insecurity, more financial incentives on the market) and there is a risk that the Technical Component results might not be capitalised on by the Financial Component, unless the Financial Component has a strong technical component that advises on how to restructure the financial mechanisms to be effective in the new market conditions [Single source - NT6AA]</p>	
4.1 (Proposed by ELE team)	In the context of other public and private initiatives in Chile in relation to clean energy, how significant has the NSP been and how far can its catalysing effect be confirmed?	<ul style="list-style-type: none"> ▪ The likelihood the NSP will catalyse additional, large-scale, sustained GHG savings (intentionally or unintentionally) ▪ The size of leveraged public and private investments by the NSP compared to other similar clean energy projects in Chile 	<ul style="list-style-type: none"> ▪ The NSP plays a crucial role as catalyser for scale up and replication of SSRE projects in Chile 	<ul style="list-style-type: none"> ▪ See answer to ELEQ 4. 	<ul style="list-style-type: none"> ▪ Annual report 2017, 2018 and 2019 ▪ Semi-annual report 2020
5 SUSTAINABILITY					
5	What is the likelihood that the outcomes will be sustained after the end of the NSP funding period?	<ul style="list-style-type: none"> ▪ The extent of the evidence supporting the NSP sustainability (e.g. evidence of self-sustaining institutional structures, and political and financial commitment of key stakeholders) 	<ul style="list-style-type: none"> ▪ Technical Component activities will help strengthen the SSRE sector in Chile and the capacities built will stay and serve other private or public related initiatives, beyond the scope and duration of this NSP project. 	<ul style="list-style-type: none"> ▪ The MoE shows evidence of strong ownership of the NSP and seems to be ready to provide continuation to key products of NSP [Strong evidence - NT1AK, NT4AK, NT5AK, NT6AK, NT7AK, NT8AK, NT10AK, TP21AK, TP22AK, TP27AK, PR14 - disputed by NS11AL], although roles and responsibilities for some NSP components (e.g. the national MRV system), are not yet clearly designated (For more details, see the MRV intermediate outcome section) [Medium evidence - NT1AL, TP26AL]. Nevertheless, the MoE & KfW worked very closely with CORFO in the design of the Financial Component [Medium evidence - NT4AK, NT5AK & NT5AL, SAR20]. 	<ul style="list-style-type: none"> ▪ Annual report 2017, 2018 and 2019 ▪ Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
		<ul style="list-style-type: none"> There is little or no risk of backsliding or reversing 		<ul style="list-style-type: none"> To several interviewees, it was not clear, who will be the future project leader of the NSP and its components, when the Technical Component finishes [Strong evidence - NT4AL, NT7AL, NT8AL, NS14AK, SAR18]. ASE was named as a natural technical backstopper for the Financial Component, but this might not be feasible (risk), as they have currently no additional budget for this task [Very strong evidence - NT1AL, NT2AL, NT5AL, NT6AL, NT9AL, NT10AK, NS18AK, TP25AK & TP25AL]. On the other hand, it was disputed that the Financial Component organisations have instead a clear understanding of the roles and responsibilities in managing the Financial Component elements [Single source - NT10U]. Several stakeholders noted, that the handover process itself could be a main challenge and might fail [Very strong evidence - NT3AL, NT5AK, NT9AL, NS11AL, TP22AL], if the MoE won't take over due to declining ownership [Single source - NS11AL] or the fact of the timeline mismatch of the Technical & Financial Components and the challenging Financial Component planning process itself. General difficulties in the handing over process was on the other hand disputed [Medium evidence - NT4AK, NT8AK]. As new tasks arise, like the reorganisation of the energy distribution or the promotion of new financial models, the future lack of technical support through the Technical Component might be a big challenge for the ministry [Medium evidence - NS14AL, TP29AL]. The MoE and CORFO might have as well difficulties in moving as fast as GIZ with their sub-components (e.g. in terms of developing new technical studies or awareness products) and face different expectations on the timeframe [Medium evidence - NT2AK, NT4AL, NT10AL], as the project had always political support, however not on the highest priority [Single source - NT3AL]. Permanent adjustment to the postponement of the Financial Component was necessary and done [Medium evidence - NT1AN, NT5AM, NT6AN]. The actual delay of the Financial Component had a big impact. In this regard, working with businesses and preparing them for the Financial Component was perceived as a rather theoretic exercise [Single source - NT8AN]. Also, attention was drawn to the fact that KfW has no staff on the ground, which can monitor and evaluate the future effectiveness of the implementation of their outputs and, in case, to adapt it [Single source - NT11AN]. 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<ul style="list-style-type: none"> Several sources stated optimistically, that the Technical Component outcomes and products (e.g. price index, MRV tool) will be sustained after the end of the Technical Component funding period [Strong evidence - NT2AM, NT7AM & NT7AN, NT8AM, NT10AM, TP19AM, TP26AM, PR14AM, AR19AM], although some sources dispute the capability of the MoE to appropriately manage the knowledge developed by the Technical Component outputs and to institutionalise it within the ministry [Medium opinion - NT9AN, NS11AN]. Also, the lack of resources within the ministry can be observed from the fact that MoE has requested technical assistance from the NSP for tasks that go beyond the scope of the project and were not aligned with the NSP's original goals [Strong evidence - NT1F, NT8F, NS11F]. On the other hand, some outcomes (e.g. the PV sector) might require less attention in the future [Medium evidence - NT8AN, TP25AM], and the NSP might have to adapt and complement the (solar) RE with other sources (e.g. thermal) [Single source - NT3AN]. In general, the strong alignment of the NSP's goals to the government's long-term agenda is an indicative factor about the high likelihood of long-term sustainability of the NSP outcomes [Single source - NT6AM]. But there were some external factors observed, e.g. the uncertainty with the climate change law or the fact, that Chile is no longer an ODA country, which might represent a risk for the Financial Component sustainability [Medium opinion - NT7AN, TP28AN]. 	
6 LEARNING					
6	What key lessons can be learnt to the benefit of the Financial Component or other NSPs in achieving their results?	<ul style="list-style-type: none"> The NSP's generation of important lessons for other NSPs 	<ul style="list-style-type: none"> The NSP will generate important lessons for other NSPs 	<ul style="list-style-type: none"> There are a few ESCOs or technology providers that are becoming too big and thus concentrating the market. This is a threat to the market and particularly to small and medium companies that cannot compete with large corporations. People are worried that the same big companies that are leading the energy market up to now, will also take on the RE market. And this extreme concentration is one of the main reasons of the social unrest, therefore is key for the NSP to help promote much faster and strong development of SMEs in the energy sector, to be better aligned with the expectations from the Chilean society in terms of the future approach to economic development for the country. [Single source - TP30L] A lesson learned from several interviewees stated the importance, to maintain flexibility in the project focus, to be able to respond to context 	<ul style="list-style-type: none"> Annual report 2017, 2018 and 2019 Semi-annual report 2020

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>changes (e.g. the green COVID recovery, technology and market changes or less required attention of the PV sector) [Very strong evidence - NT2AO, NT5AO, NT6AO, NS11AO, TP22AO, NT1AP, NT8AP]. Also, to broaden the view on and coordination with available alternative financial instruments (e.g. guarantee fund, green certificates, revenues from offsets) and models (e.g. ESCO, mortgage, PACE, leasing) beyond the Financial Component [Very strong evidence - NT6AO, TP19AO, TP20AO, TP22AO TP24AO, TP28AO, TP29AO, NT4AP, NS11AP, TP23AP, TP30AP] was reported. In this regard, the global guarantee fund is for instance not an overlap to NSP, nor a competitive, but rather complementary instrument [Single source - TP28AQ]. In addition, the NSP could widen the scope towards other RE niches (e.g. heat, hydrogen, waste to energy, biomass, geothermal, less PV focus) [Very strong evidence - NT4AO, NT8AO & NT8AP, NS13AO, NS17AO, TP22AO, TP23AO, TP25AO, TP28AO, TP29AO, AR18AO, NS12AP, TP21AP], as well as other regions (include more rural/remote areas, involve local communities) [Medium opinion - TP21AP, TP26AP, TP30AP], to increase its impact.</p> <ul style="list-style-type: none"> Concerning the Financial Component, technical assistance for the financial sector is still very necessary and requested (e.g. to lower admin barriers) [Very strong evidence - NT4AO, NT6AO, NT10AO & NT10AP, NS16AO, NS18AO, TP19AO, TP20AO, TP23AO, TP24AO & TP24AP, TP29AO & TP29AP, NT7AP, NS8AP, NT10AP, TP21AP, TP22AP, TP27AP]. It is also important to develop further the bankable project pipeline, which requires large efforts and follow up [Very strong evidence - NT1AO, NT6AO, TP22AO, TP24AO & TP24AP, TP25AO, TP27AO, NS11AP, NS16AP]. Economic considerations and incentives are key drivers for investments of the bankable projects. [Medium opinion - NS18AO, TP24AO]. Unfortunately, the too small overlap of Technical and Financial Components was perceived as a risk for the success of the NSP [Very strong evidence - NT1AP, NT4AP, NT8AP, NT10AP, NS11AP, AR18AP, TP20AP, TP22AP, TP25AP, TP26AP, SAR18AP, AR18AP, SAR20AP]. If the NSP would have known since the beginning that the financial component would come on 2020, things would have been probably different [Strong evidence - NT6AP, NT9AP, TP22AP, TP26AP, TP28AP]. It is very important, to monitor the outcomes and learnings from the Financial Component pilot phase and make sure, it comprises the initial intended goals [Very strong evidence - NT6AO, TP28AO, NS11AP, 	

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
				<p>TP22AP]. A key to success is the coordination with, and alignment with the Chilean government (including MMA/MoFin./reg. Gov.), which always can be improved or intensified, especially during the handing over process, and in regards to knowledge management and trust building [Very strong evidence - NT1AO, NT6AO, NT7AO & NT7AP, NT8AP & NT8AO, NS18AO, TP20AO, AR19AO, NT3AP, NT4AP, NT9AP, NT10AP, TP26AP]. It is also important to strengthen the relationship with, and increase influence of key stakeholders (e.g. implementers associations, ASE, CAMCHAL) [Very strong evidence - NT1AO, NT5AO, NT6AO, NT7AO, NS14AO, NS15AO, NS17AO, TP22AO, TP25AO & TP 25AP, NS16AP, TP30AP]. In general, it helps to improve visibility, diffusion, transparency of information, and communication of NSP (e.g. diversify the type of media used for diffusion) [Very strong evidence - NT6AO, NS16AO, TP26AO, TP28AO, NS13AP, NS15AP, NS18AP, TP19AP, TP21AP, TP23AP, TP30AP]</p> <p>▪ Another attention was drawn towards the Chilean overall energy strategy (overarching plan), and regulation/laws in specific, which still can be improved further (see the Impact section for more details) [Strong evidence – TP19AO, TP23AO, TP26AO, TP30AO & TP30AP, NT1AP, NT7AP, NT9AP, NT29AP].</p> <p>▪ Concluding the lessons learned, several Single sources were stated, such as: communication and coordination with MoE and the NSP team wasn't always the best [Single source - NT1AP]; technical capacity was not such an important gap, while the key gap in the SSRE market was financial [Single source - NT4AP]; GIZ focused too much on sectoral associations [Single source - NT4AP]; and there should have been indicators that can tell more about the importance of the link between Technical Component and Financial Component [Single source - NS11AP].</p>	
6.1	How was learning from this NSP shared with other NSPs (e.g. Mexico's NSP "Energy Efficiency in SMEs as a Contribution to	<p>▪ The presence of instances where the lessons from this NSP has changed the approach / results of other NSPs or projects</p>	<p>▪ The learning from this NSP is contributing to change the approach and results of other NSPs or projects</p>	<p>▪ The learning exchanged and interconnection with other GIZ projects were perceived as "key" important for further success [Very strong evidence - NT1AQ, NS18AQ, PR14AQ] alike the interaction and knowledge sharing (e.g. of management & methodologies) within the NSPs of other countries (e.g. the adoption of the Chilean price index methodology by the NSP in Mexico) [Strong evidence - NT5AQ, TP28AQ, PR14AQ, SAR20AQ - disputed as still insufficient by NT9AR].</p>	<p>▪ Annual report 2017, 2018 and 2019</p> <p>▪ Semi-annual report 2020</p>

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	ELE evidence	Sources of evidence
	a Low Carbon Economy”) / projects, and did they make any changes to their approach as a result?				
6.2	How did the sharing of learning by other NSPs and other projects contribute to the successful implementation of the NSP?	<ul style="list-style-type: none"> ▪ The presence of instances where the lessons from other NSPs or other projects have resulted in the change of approach or results of this NSP 	<ul style="list-style-type: none"> ▪ The sharing of learning by other NSPs and other projects is contributing to the successful implementation of the NSP 	<ul style="list-style-type: none"> ▪ Further exchange and work could be done with the industry sector (e.g. in regards of the new project “Casa Solar” or concerning commercial opportunities with foreign companies) [Medium evidence - NT7AQ, TP28AQ]. 	<ul style="list-style-type: none"> ▪ Annual report 2017, 2018 and 2019 ▪ Semi-annual report 2020

Annex D Validity of the causal pathways using process tracing tests

The table below shows the result of the application of formal process tracing tests on the causal pathways of the NSP ToC to assess the strength of the evidence collected by the ELE to either confirm or reject the hypotheses behind each causal chain.

Overview on the validity of the causal pathways using process tracing tests

Formal test	Test description	Causal pathways of the NSP	Process tracing test
Smoking gun (confirmatory)	If evidence is observed, the hypothesis is confirmed. If evidence is not observed, the hypothesis is not confirmed, but this is not enough to reject the hypothesis.	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 1: If the NSP increases the <u>outreach</u> on the economic and technological feasibility of SSRE projects amongst relevant private and public decision makers (Output 1-TC), then the general awareness of the market on SSRE projects' benefits and possibilities will be raised (Intermediate Outcome 1), the SSRE end-users will be more prone to invest in SSRE projects and there will be an increase in the demand of SSRE projects (Outcome 1). 	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 1: Evidence of the Output and the Intermediate Outcome and the Outcome (i.e. the SSRE demand has increased) is observed, and it is likely the hypothesis is correct, but because of the lack of specific SSRE projects supported by the Financial Component, there is not enough evidence to confirm the hypothesis.
Hoop test (disconfirmatory)	If the evidence is not observed, the hypothesis is rejected. If the evidence is observed, the hypothesis is not rejected, but this is not sufficient to confirm the hypothesis.	<ul style="list-style-type: none"> No causal pathway falls into this category 	

Formal test	Test description	Causal pathways of the NSP	Process tracing test
Double decisive	If evidence is observed, the hypothesis is confirmed. If the evidence is not observed, the hypothesis is rejected.	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 2: If the NSP <u>builds capacities</u> of relevant stakeholders through professional training, studies, and visits (Output 2-TC) and, at the same time, supports the Government to improve the regulatory framework related to SSRE, then the number of private companies that implement SSRE projects is increased (Intermediate Outcome 2), they are assisted by the NSP to perform basic and advanced steps in SSRE project development, and ultimately there will be an increase in the supply of SSRE technologies (Outcome 2). 	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 2: Evidence of the Output and the Intermediate Outcome and the Outcome (i.e. the SSRE technologies supply has increased) is observed, and the hypothesis is confirmed. There is evidence to suggest that if the Output is not observed (particularly in terms of the regulatory improvements), the extent of the Outcome's observation would be substantially reduced.
		<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 4: If the NSP supports the development of a robust and flexible <u>MRV system</u> for SSRE projects (Output 4-TC) and it supports the ownership transfer of MRV system to the Government and the testing of the MRV system on real SSRE projects (Intermediate Outcome 4), then the GHG mitigation and sustainable development co-benefits of the SSRE projects can be measured and observed and the demonstration of the benefits strengthen the SSRE market (Outcome Statement). 	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 4: Evidence of the Output and the Intermediate Outcome and the Outcome (i.e. the SSRE market is strengthened) is observed, and the hypothesis is confirmed. There is evidence to suggest that if the Output is not observed, the extent of the Outcome's observation would be substantially reduced.
Straw in the wind	If the evidence is observed, this is not sufficient to confirm the hypothesis. If the evidence is not observed, this is not sufficient to reject the hypothesis.	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 3: If the NSP increase the amount of SSRE <u>project preparations</u> through appraisals and new business cases (Output 3-TC) and, at the same time, supports the Government to improve the regulatory framework related to SSRE and the Financial Component supports the launch of SSRE-tailored financial instruments (Outputs-FC), then SSRE stakeholders apply for financing subsidies for SSRE projects (Intermediate Outcome 3) and there will be an increase in both the demand of SSRE projects (Outcome 1) and the supply of SSRE technologies (Outcome 2). 	<ul style="list-style-type: none"> Causal pathway supporting Intermediate Outcome 3: Because of the lack of activities under the Financial Component, only evidence of the Technical Component's Output is observed, but not evidence of the Financial Component's Output and therefore the hypothesis cannot be neither confirmed nor rejected, at this point.

Annex E NSP achievements against logframe indicators

Below are reported the Chilean SSRE NSP logframe indicators grouped under the relevant elements of the ToC. Target and achieved figures are reported with a Red-Green (i.e. target not met-met) assessment. Only indicators relevant to the TC are reported.

E.1 Impact indicators

Impact: The sustainable change in the energy mix of Chile is strengthened, bringing about significant environmental (e.g. reduction of GHG emissions and pollutants, potential improvement of waste management), economic (e.g. improvement of energy security) and social impacts (e.g. creation of jobs)

#	Indicator	Baseline	2024
PG1	The installed capacity of renewable energy self-supply is increased by 45 MW.	32.72 MW	+7.14 MW *
PG2 (M1)	Greenhouse gas emissions are reduced by 1.5Mt CO ² eq.	0	- 260,434 t CO ² **

* Note: Figure from Logframe Report 2017.

**Note: Figure from M&E plan 2019 (M1 total)

E.2 Outcome indicators

Outcome: The technical capacities for the implementation and demand for SSRE projects are increased.

#	Indicator	Baseline	Target 2020	Achieved*
O1	Awareness for the potential of SSRE projects among potential end-user stakeholders is increased by 30 per cent.	20%	50%	87%
O2	The number of private companies that implement SSRE projects is increased by at least 10 companies.	41	51	116
O3	A number of RE self-supply projects that is equivalent to 200 MW installed capacity apply for financing subsidies of (pre-) feasibility studies.	0	200 MW	0

O4	A functioning MRV (Monitoring, Re-reporting, and Verification) system for SSRE is in place at CIFES and is used for reporting and project management optimization.	0	1	2
----	--	---	---	---

*Note: Figure from M&E plan 2019

Comment on #O4: A second MRV tool has been developed, which aims to determine large-scale RE projects, which is complementary to the SSRE MRV.

E.3 Output indicators

Output A: (Outreach and Awareness raising) Awareness measures are implemented				
--	--	--	--	--

#	Indicator	Baseline	Target 2020	Achieved*
A1	Information events for awareness for SSRE through 300 private and/or public decision makers in 3 industrial sectors and 3 regions are implemented.	0	300	748
A2	Information material on SSRE potential and/or best practice is published among potential SSRE end-users.	0	4	14

*Note: Figure from M&E plan 2019

Output B: (SSRE Capacity building) Stakeholders of the private sectors gained professional skills in SSRE feasibility analysis, project development and management and application of SSRE technologies.				
---	--	--	--	--

#	Indicator	Baseline	Target 2020	Achieved*
B1	100 additional entrepreneurs completed successfully professional training courses on SSRE project analysis, management and development.	0	100	424
B2	40 people participated in good-practice site-visits and/or international exchange programs.	0	60	69

*Note: Figure from M&E plan 2019

Comment on #B2: This year there (2019) was no good practice site-visits and/or international exchange programs.

Output C:
(Project Preparation)
A project preparation advice structure is established.

#	Indicator	Baseline	Target 2020	Achieved*
C1	200 inquiries on project development support received professional advice.	0	100	229
C2	A virtual project development information platform is established.	0	1	1

*Note: Figure from M&E plan 2019

Comment on #C1: Only 11 new projects received professional advice from this NSP, mainly due to lack of funds to install the projects. (2019)

Comment on #C2: During 2019 the Ministry of Energy has asked this NSP to help on improvements on “Gestiona Energía MiPyMEs” online platform, which aims to assess SMEs on energy.

Output D:
(Monitoring Reporting Verification (MRV))
An MRV-system for the SSRE NAMA is in operation.

#	Indicator	Baseline	Target 2020	Achieved*
D1	A functioning MRV system including SSRE is designed and implemented at CIFES.	0	1	1
D2	A regular process for project management optimization is established. Virtual project development information platform is established.	0	1	1

*Note: Figure from M&E plan 2019

Comment on #D1: Validation process of the MRV tool was successfully fulfilled during 2019.

Annex F List of ELE sources

F.1 Internal documents

1. NAMA Support Project Proposal 2014 – Chile Self-Supply Renewable Energy.
2. Chile Self-Supply Renewable Energy NSP – Semi-Annual Report 2016.
3. Chile Self-Supply Renewable Energy NSP – Annual Report 2016.
4. Chile Self-Supply Renewable Energy NSP – Semi-Annual Report 2017.
5. Chile Self-Supply Renewable Energy NSP - Annual Report 2017.
6. Chile Self-Supply Renewable Energy NSP – Semi-Annual Report 2018.
7. Chile Self-Supply Renewable Energy NSP - Annual Report 2018.
8. Chile Self-Supply Renewable Energy NSP – Semi-Annual Report 2019.
9. Chile Self-Supply Renewable Energy NSP - Annual Report 2019.
10. Chile Self-Supply Renewable Energy NSP – Semi-Annual Report 2020.
11. Chile Self-Supply Renewable Energy NSP Amendment request January 2018
12. Chile Self-Supply Renewable Energy NSP Amendment request August 2019
13. Chile Self-Supply Renewable Energy NSP Amendment request October 2019
14. Chile Self-Supply Renewable Energy NSP Semi-Annual Tentative Monitoring & Evaluation Plan 2016
15. Chile Self-Supply Renewable Energy NSP Log-frame annual report 2017
16. Chile Self-Supply Renewable Energy NSP Annex IV Monitoring & Evaluation Plan 2017
17. Chile Self-Supply Renewable Energy NSP Annex III Monitoring & Evaluation Plan 2018
18. Chile Self-Supply Renewable Energy NSP Annex III Monitoring & Evaluation Plan 2019
19. Centro de Energía Facultad de Ciencias Físicas y Matemáticas Universidad de Chile, 2016, “Priorización de sectores para la preparación del proyecto NAMA SSRE y análisis de la línea base”.
20. Ricardo Energy & Environment, 2018, “Revisión de la metodología de estimación de emisiones y reducciones GEI. MRV para el proyecto de soporte de NAMA: Energías Renovables para Autoconsumo en Chile”.

Public documents

-
21. Chile Self-Supply Renewable Energy NSP, 2017, 2018 y 2019, “Índice de Precios de Sistemas Fotovoltaicos (FV)”.
 22. Chile Self-Supply Renewable Energy NSP, 2017, “Guía para el instalador de plantas de biogás de mediana y gran escala”.
 23. Chile Self-Supply Renewable Energy NSP, 2017, “Análisis del sector de Packing e identificación de posibilidades para ERNC”.
 24. Chile Self-Supply Renewable Energy NSP, 2017, “Sistemas Fotovoltaicos para el Autoconsumo”.
 25. Chile Self-Supply Renewable Energy NSP, 2018, “Guía de Operación y Mantenimiento de Sistemas Fotovoltaicos”.
 26. Chile Self-Supply Renewable Energy NSP, 2018, “Contrato de Mantenimiento Tipo de Sistemas Fotovoltaicos”.
 27. Chile Self-Supply Renewable Energy NSP, 2018 “Guía para empresas e industrias calderas y quemadores a biomasa para autoconsumo”.
 28. Chile Self-Supply Renewable Energy NSP, 2019, “Elaboración de índice de precios de calderas, calefactores de biomasa y pellets por región de Chile”.
 29. Chile Self-Supply Renewable Energy NSP, 2019, “Estudio de factibilidad de un biodigestor anaeróbico en Frigosorno S.A.”
 30. Chile Self-Supply Renewable Energy NSP, 2019, “Estimación del potencial nacional de biogás en faenadoras de carne en Chile”.
 31. Chile Self-Supply Renewable Energy NSP, 2019, “Estudio de Mercado de Bombas de Calor 2019, incl. Cadena de Valor”.
 32. Chile Self-Supply Renewable Energy NSP, 2019, “Índice de Precios de Bombas de Calor 2019”
 33. Chile Self-Supply Renewable Energy NSP, 2020, “Guía FV de Autoconsumo”.
 34. Flux Solar, 2020, “Generación Distribuida Instalada SEC”.

F.2 List of organisations interviewed

Institution	Position
NSP Team	
KfW	Project Manager (Financial Component)
KfW	Technical Advisor (Financial Component)
KfW	Local consultant(Financial Component)
CORFO	Head of Unit of Studies and Design (Financial Component)
CORFO	Professional Unit of Studies and Design (Financial Component)
GIZ Chile	Professional (Technical Component)
GIZ Chile	Professional (Technical Component)
GIZ Chile	Professional (Technical Component)
GIZ Chile	Project Director (Technical Component)
Ministry of Energy	Head of Division of Sustainable Energies (Both Components)
Ministry of Energy	Head of Unit of Productive Sectors (Both Components)
Ministry of Energy	Professional of Unit of Productive Sectors (Both Components)
Ministry of Energy	Professional of Unit of Productive Sectors (Both Components)
NSP Stakeholder	
NAMA Facility Technical Support Unit	Former Chile SSRE NSP Desk Officer
Ministry of Energy	Professional Environment and Climate Change Division – (DACC)
Ministry of Energy	Professional DACC
Ministry of Energy	Professional of Regulatory Support Unit
Ministry of Environment	Head of Climate Change Division
Superintendence of Electricity and Fuels (SEC)	Professional of Renewable Energies and Electromobility
Grammer Solar	Project Manager
Frigosorno	Operations Manager
Fedetur	Project Manager
Chileoliva	Project Manager
Third Party	
British Embassy Santiago	Head of COP Unit / Climate Change Policy Manager
German AHK (CAMCHAL)	Project Manager - Smart Energy Concepts
CNR - National Irrigation Commission	Professional of Division of Studies, Development and Policies
Acesol / Flux Solar	Director / Founder

Aguasol	Commercial Manager
BancoEstado	Deputy manager commercial relations and environment
BancoEstado	Executive commercial relations and environment
ANESCO	General Manager
Banco Santander	Head of Consumer and commercial loans
Banco Santander	Executive of Consumer and commercial loans
Agencia de Sostenibilidad Energética (ASE)	Head Industry and Mining
UNIDO project “Biogas Lechero”	Former Project Manager (At present, Head of Environmental Division at Ministry of Energy)
World Bank Partnership for Market Readiness (PMR)	Former Head of PMR programme in Chile (At present, Representative at Ministry of Energy)
Asociación Chilena de Energías Renovables y Almacenamiento (ACERA)	Studies Director

Annex G Terms of Reference of the Chile SSRE NSP ELE

NSP Chile Renewable Energy

Final evaluation of Technical Component

G.1 Background

This document describes the Evaluation and Learning Exercise for the NAMA Support Project (NSP) 'Chile Self-Supply Renewable Energy'. This is a work package commissioned under the Project title and contract number below.

Project title:	Project evaluation and learning exercises for the NAMA Facility
Project and reference number:	12.9097.2-108.00 / 81238912
ELE scope (mid-term/final):	Final ELE
ELE focus (TC/FC/both):	Technical Component only

G.2 Terms of reference

G.2.1 General TORs as defined in TORs for all ELEs and theoretical framework

This Evaluation and Learning Exercise (ELE) is implemented within the general Terms of References (TORs) and following the theoretical framework, and these two documents are binding.

However, as a short reminder, the focus is on the following three questions:

- Has the NSP been achieving its results?
- Has the NSP started to trigger transformational change?
- What was learnt from the NSP so far?

G.2.2 Specific additional elements to be considered in this ELE

It is to be noted that, due to substantial delays in the Financial Component (FC) of the NSP, this ELE will be treated as a final evaluation of the Technical Component (TC) only, while looking at the same time at lessons to be transferrable to the FC.

Please note below the additional elements/questions to be considered in this ELE:

1. Are results that are reported for M1-M5 in line with the NAMA Facility's M&E framework? (see ELE Matrix Q 2.2)

2. In the context of other public and private initiatives in Chile in relation to clean energy, how significant has the NSP been and how far can its catalysing effect be confirmed?? (see ELE Matrix Q 4.1)
3. How severe is the impact of the delayed FC on the TC's success, and the overall NSP? (see ELE Matrix Q 1.2, 2, 2.1, 2.2, 2.5, 3, 4)
4. Has learning been successfully integrated within the project to adapt to changes in the context? How can the Monitoring, Evaluation, and Learning system of the NSP be improved to benefit the continuation of the FC? (see ELE Matrix Q 2.7, 2.6)
5. Are there lessons learned and recommendations from TC implementation that the FC can benefit from during its remaining implementation period? (see ELE Matrix Q 6)
6. How did the NSP learn from the previous SSRE experience in Chile (April 2013)? What were the key lessons and how have they been applied to the NSP? (see ELE Matrix Q 6, 6.2)
7. Have any unintended adverse or positive impacts occurred? (see ELE Matrix Q 2.4)
8. What is the likelihood that the outcomes will be sustained after the end of the NSP funding period? (see ELE Matrix Q 5)
9. Have any of the foreseen co-benefits (GHG emissions reduction and broader sustainable development) already been achieved or do they depend to a larger extent on the FC? Has the TC set the groundwork for co-benefits to materialise? (see ELE Matrix Q 4, 4.1, 5, 2, 2.2)
10. Has the TC developed a robust and functioning MRV system? Do the actors to be involved in the MRV system's functioning have a clear idea of their roles and responsibilities and are they capable to fulfil those roles? (see ELE Matrix Q 2, 2.2, 5)
11. How satisfied are the direct TC beneficiaries of the support received? (see ELE Matrix Q 3, 2.3)

G.2.3 Specific elements/questions that will not be considered in this ELE

The general TORs and the theoretical framework allow for a prioritisation of some evaluation questions at the expense of other evaluation questions. Please note below those elements/questions which will not be considered in this ELE:

1. All the indicators that are directly dependent on the FC and could not have been achieved by the TC alone.
2. The question of whether the NSP has been using the NAMA Facility's resources efficiently.

G.3 Suggested staff

The contractor suggests the following staff (see CVs attached):

- Senior international consultant 1: Luca Petrarulo
- Senior international consultant 2: Tobias Kuehner
- Local consultant: Gerardo Canales Gonzalez

G.4 Timing

The contractor suggests the following timing:

Item	Date / period	Comment
Kick-off call TSU / ELE team / NSP	4 September 2020	
Exchange of preliminary information	Starting week of 7 September 2020	

Item	Date / period	Comment
Availability of detailed agenda	5 October 2020	
Field phase	5 – 16 October 2020	
Draft report delivery	13 November 2020	
Final report delivery	11 December 2020	Assuming one feedback cycle. (Note that the TORs allow for more feedback cycles if necessary.)