

Self-Supply Renewable Energy (SSRE) NAMA in Chile



1. Facts

Implementing partners:	Ministry of Energy Ministry of the Environment International Cooperation Agency (AGCID) Economic Development Agency (CORFO) Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH KfW Development Bank
NAMA Facility funding	EUR 17 million
Project duration	seven years
Status	implementation

2. Towards a New Paradigm

The Self-Supply Renewable Energy (SSRE) NAMA Support Project aims to promote small and medium-scale renewable energy systems for self-supply in Chile. This overall goal will require the creation of adequate financial and technical conditions for this emerging segment of the renewable energy industry.

Small and medium-scale renewable energy systems introduced as part of SSRE NAMA will help secure a diverse and sustainable energy supply, an essential step for the shift toward renewables in Chile's installed generating capacity.

SSRE NAMA's technical cooperation (TC) component will consist of awareness-raising activities and improvements in technical conditions and capacities for project development and implementation. The financial cooperation (FC) component will include the creation of efficient and suitable access to financial instruments that promote investment and financing in this sector. An innovative mix of financial mechanisms will include investment incentives to encourage the development of a bankable project pipeline, targeted capital grants and a loan guarantee fund. The FC component will also include support and training for financing institutions.

On behalf of



Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety



Department for
Business, Energy
& Industrial Strategy



3. Change in the Face of Challenges

According to the International Energy Agency, Chile's per capita emissions are close to the global average and below those of at least one half of all OECD countries. Current growth scenarios, however, forecast a 47 to 51 per cent emissions increase from 2010 to 2020. As a signatory to the Paris Agreement, Chile's nationally determined contribution (NDC) calls for a 30% reduction in CO₂e emissions based on 2007 levels by 2030.



The energy sector (including transport) is by far the largest GHG emitter in Chile, responsible for 75% of the country's emissions, mainly due to the use of coal and diesel for power generation. Nevertheless, Chile has made targeted efforts to promote the growth of non-conventional renewable energy sources, including geothermal, wind, solar, biomass and small hydro, to account for 60% of the installed generating capacity by 2035. Chile has significant potential in the area of large-scale renewables, and has seen impressive growth in solar and wind in recent years. Renewable energy, particularly the use of utility-scale solar energy, has also become more and more economically attractive due to declining technology costs.

Yet the market for small and medium-scale SSRE solutions in Chile is still lagging behind. Research has shown that potential investors either lack the necessary knowledge about small and medium-scale SSRE or they lack access to attractive financing conditions or are discour-

aged by the costs of feasibility studies and relatively high upfront investments. SSRE NAMA has identified a need for greater awareness, increased technical capacities for the development and implementation of projects, and improved access to financial instruments that mobilise the required private sector investments.

4. Achieving Transformational Change

The SSRE NAMA Support Project (NSP) aims to achieve transformational change in the renewable energy (RE) sector by promoting the use of SSRE for both electricity and heating. By addressing the specific barriers that current small and medium-scale RE investors face, this project will generate substantial synergies to catalyse the long-term development of Chile's renewable energy sector.

SSRE NAMA aims to foster the development of a national pipeline of projects, without relying on long-term subsidies. For the duration of the programme, this market expansion will gradually reduce the levelised cost of energy of various RE technologies. Financial and technical project components will supply guidance and expertise to support the industry. This support will include raising both awareness and demand for renewable energy projects, providing practical experiences such as training and workshops for local companies to build awareness, drive down costs, helping the industry become more competitive and continue expanding, and building up institutional capacities for additional projects in the future while keeping pace with technological progress.

SSRE NAMA will endeavour to build up knowledge on the opportunities, development and operation of self-supply RE systems in order to generate greater demand for these technologies. Activities conducted as part of the awareness-raising (technical) component will disseminate knowledge about the benefits of SSRE systems to a large number of stakeholders. Target groups for these activities will mainly include companies, business associations, energy service companies (ESCOs) and technology providers. Broader stakeholder groups, including government officials and civil society actors, will also be addressed.

The technical component covers:

- Outreach and awareness: Technology roadshows and site visits sponsored by the NAMA Support Project will bring potential investors in contact with the technologies and current users to raise awareness of SSRE-based options for Chilean industry.
- Training and capacity building: Workshops and trainings providing insights into topics such as feasibility analysis, project development, operation and maintenance to public and private sector stakeholders.
- Knowledge exchange: Exchange programme for national and international experts to share their experiences and expertise.
- Technical help desk: Support for potential investors or project developers on questions related to technologies, project development, regulatory and legal matters.
- Monitoring, reporting and verification (MRV): Development of a GHG inventory in the small and medium-scale energy sector and design of an MRV system for the SSRE NAMA Support Project.

SSRE NAMA specifically aims to leverage around USD 100 million in private sector investments in 45 megawatts of additionally installed generating capacity across a range of project types including rooftop PV, solar water heaters, heat pumps, biomass, biogas, and small-hydro technologies.

The financial component comprises the following elements:

- Development of a bankable project pipeline through the funding of pre-investment grants to cover project preparation studies (at least 90 studies to be supported by the NSP). Successful projects will be encouraged to apply for the SSRE guarantee fund;
- Provision of investment grants/subsidies of up to 10% of the total investment (at least 80 projects to receive investment subsidies);
- Training and advisory services for up to four financial institutions, including project screening within their loan book, knowledge development and an evaluation toolkit;
- Establishment of EUR 11 million guarantee fund, to be operated by CORFO, which will guarantee commercial loans, covering losses and default.



5. Expected Results

Over the first 25 years of the project, the cumulated mitigation potential of the NSP is anticipated at 1.5 Mt CO₂e. The technology mix is expected to be mainly rooftop solar, with further investments in solar water heaters, micro-hydro and biogas projects.

The total financing volume to be leveraged by the SSRE NAMA NSP is estimated at USD 100 million, from the private sector.

Promoting the small and medium-scale renewable energy market in Chile will have important impacts that promote sustainable economic, environmental and societal development, including:

- Job creation through RE projects supported by SSRE NAMA
- Fewer environmental pollutants, noise and noxious odours emitted from project sites
- Reductions in energy demand and costs
- Improved energy security at the national and local levels

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