

ASSISTANCE FOCUS: ASIA/PACIFIC REGION



The Clean Energy Solutions Center, an initiative of the Clean Energy Ministerial, helps countries throughout the world create policies and programs that advance the deployment of clean energy technologies. Through the Solutions Center’s no-cost “Ask an Expert” service, a team of international experts has delivered assistance to countries in all regions of the world. High-impact examples from the Asia/Pacific region are featured here.

MAPPING BUILDING RETROFIT POLICY AND FINANCE IN ULAANBAATAR, MONGOLIA

The Clean Energy Solutions Center worked with the municipality of Ulaanbaatar, Mongolia to develop a roadmap for a government- and commercial-scaled retrofit policy and program implementation. The team also worked to identify available finance mechanisms.

IMPACT OF ASSISTANCE. Support from the Solutions Center helped to synthesize outcomes from previous feasibility reports into a conceptual roadmap and identified a financing gap of 40 million USD for eventual program implementation. The Solutions Center provided recommendations for filling the financing gap and for ensuring accuracy and clarity when presenting the roadmap and proposed building energy retrofit program outcomes.



Ulaanbaatar, Mongolia, *Photo from iStock 496260397*

BUILDING CAPACITY FOR STUDIES AND PROPOSALS IN SMALL ISLAND NATIONS

The Solutions Center teamed with IRENA in support of their Lighthouse Initiative during a workshop held in Singapore to deliver assistance to several small island nations: Cook Islands, Maldives, Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The workshop built capacity for ministry policymakers to conduct feasibility studies and develop financial proposals for clean energy projects.

IMPACTS OF THE ASSISTANCE. The workshop attendees learned the fundamental methods and requirements for structuring financial proposals that will mobilize investment for their clean energy projects.

STRUCTURING INDUSTRIAL EFFICIENCY PROGRAMS IN INDIA

The Clean Energy Solutions Center assisted and collaborated with the Bureau of Energy Efficiency (BEE) on a webinar training focused on industrial efficiency programs. The Solutions Center organized and hosted the webinar that provided information on policy best practices for industrial efficiency. The content of the webinar was tailored to address India's specific needs. The presentations included best practices and lessons learned resulting from industrial efficiency policies implemented in other countries.

IMPACT OF ASSISTANCE. The training webinar provided a framework under which policymakers in India were able to discuss policies and programs structured to advance industrial efficiency efforts in their country, and provided an opportunity for participants to learn from successful policies and program implementation around the world.

COMMENT FROM REQUESTOR



“The Clean Energy Solutions Center, ever since its conceptualization and inception, has been felt as a unique resource center on energy policy. An information warehouse of such nature is truly a significant tool to shape of an individual's perception and thinking in energy policy matters. The webinar is a best fit example where the Solutions Center, through its resource experts, disseminated the trends in Industrial Energy Efficiency in India and the policy interventions thereon. The webinar received overwhelming response all across India and possibly across the globe. I am sure, in the years to come, the Solutions Center will strengthen its objective in all fronts.”

S.P. Garnaik
Energy Economist
Bureau of Energy Efficiency

FACILITATING CAPACITY BUILDING IN INDONESIA

The Clean Energy Solutions Center assisted the Energy Efficiency in Industrial, Commercial, and Public Sector (EINCOPS) Directorate General of New Renewable Energy and Energy Conservation, Ministry of Energy and Mineral Resources with developing approaches for engaging banks on energy efficiency financing programs. Information provided under this request summarized outreach and education activities designed to engage banks in offering financing for energy efficiency projects, as well as best practices on relevant approaches in identifying financial partners and understanding potential barriers to successfully engaging financial partners. Ongoing assistance is being provided to the Indonesian agency to develop an energy audit certification program and supporting curricula for industry and commercial sectors.

IMPACT OF ASSISTANCE. The support provided under the financial institution engagement request will be used to facilitate capacity building for financial institutions in collaboration with the Central Bank of Indonesia. The information will also be used to create an agenda and materials for a future workshop for national banks in Indonesia. Assistance provided for the energy audit certification program will be used to design and develop a successful and replicable program and for supporting curriculum unique to Indonesia's needs. As such, Indonesia will have a program in place to foster capacity building and job creation.



The Solutions Center assisted Indonesia with capacity building and job creation. Shown here: Indonesian capital of Jakarta. *Photo from iStock 11783006*

HELPING MALAYSIA REDUCE ITS POWER GENERATION CARBON FOOTPRINT

Through its Ask an Expert assistance program, the Clean Energy Solutions Center responded to three requests for assistance from Malaysia's Sustainable Energy Development Authority (SEDA). These requests were designed to help the Government of Malaysia develop renewable energy strategies for geothermal, solar photovoltaics (PV), and biomass and biogas projects.

Based on SEDA's requests, experts with the Ask an Expert program analyzed the following:

1. **Geothermal power development, including current market developments and global geothermal tariff benchmarking.** This analysis was designed to support geothermal development on the island of Sabah (Borneo) and to set a tariff for geothermal projects in that region.
2. **The trade-offs between feed-in tariffs (FITs) and competitive tendering for solar PV projects based on global market experience.** This analysis was designed to ensure that developers of larger solar PV projects (e.g., 5 MW to 50 MW) could compete outside the restrictive quota of the FIT to avoid consuming all the available capacity and excluding the participation of smaller players.
3. **Malaysia's biogas, biomass and solar PV tariffs.** This analysis was designed to help the Government of Malaysia determine whether to increase the tariffs or introduce additional bonuses for specific project design features to respond to stakeholder comments that current biomass and biogas rates were too low to support cost-effective project development.

After conducting these analyses, Solutions Center experts hosted three full-day workshops in Putrajaya, Malaysia, to gather input from stakeholders. Convening utility, industry, government, regulator and developer stakeholders—in addition to interested citizens—the workshops examined each topic in depth.

IMPACT OF ASSISTANCE. The Solutions Center's analysis was important in addressing several stakeholder concerns, particularly concerning tariff levels, and provided SEDA with an international perspective on tariff levels worldwide.

In addition, with attendance of more than 500 people, the workshops helped the Malaysian government:

- Improve transparency of the overall decision-making and policy-making processes by gathering interested stakeholders' views and perspectives on Malaysia's current FIT framework and the future of the renewable energy industry.
- Establish a geothermal tariff for Sabah that will be instrumental in mobilizing investment and increasing renewable energy development on the highly fossil-fuel reliant island.

COMMENT FROM REQUESTOR

"Please allow me to express the sincere thanks of SEDA and the Ministry of Energy for the expert assistance rendered to us by the Clean Energy Solutions Center. Your expert was a great help to us in evaluating our existing FIT rates, benchmarking against the rest of the world, as well as proposing rates for geothermal power generation.

He also helped us to clearly understand the pros and cons of FIT versus bidding for solar PV projects, the different mechanisms for bidding, and the size of the projects which should be considered for bidding. Your assistance has helped the Government of Malaysia make the most efficient use of our limited resources to reduce our carbon footprint in power generation. Thank you once again."

Ir. Ali Askar Sher Mohamad
Chief Operating Officer
Sustainable Energy Development
Authority (SEDA) Malaysia

- Accelerate the early phases of project development by outlining critical issues for geothermal development, as well as key ways to mitigate drilling risk.
- Ensure a more sustainable pathway toward competitive tendering for larger-scale solar PV development in the country—essential to reaching higher levels of renewable energy penetration in the future.
- Plan for derivation of tariff rates for biomass and biogas technologies and introduce further differentiations (such as landfill gas, municipal solid waste and agricultural residues).
- Consider policy mechanisms designed to achieve increased deployment of PV projects.



The Solutions Center responded to three requests for assistance from Malaysia, including one for an analysis designed to support geothermal development on the island of Sabah (Borneo), shown here. *Photo from iStock 50195088*

ASSISTING WITH ENERGY POLICY IN MICRONESIA

The Clean Energy Solutions Center assisted the North Pacific ACP Renewable Energy and Energy Efficiency Project (North REP) Economic Development Division with developing regulatory requirements, road mapping and financing programs to support compliance with energy targets defined in the 2008 Energy Policy. This assistance was provided in close collaboration with the Assistant Secretary for Energy of the Federated States of Micronesia (FSM) and the Secretariat of the Pacific Community.

IMPACT OF ASSISTANCE. The policy analysis and regulatory development assistance provided under this request created a framework for legislative annexes needed to support successful achievement of clean energy targets. As such, FSM should achieve an increase in renewable energy of more than 30 percent by 2020 and improve energy efficiency 50 percent by 2020.

HELPING NEPAL BUILD A SOLAR ENERGY FUTURE

The Clean Energy Solutions Center, under its Ask an Expert program, collaborated with the Asian Development Bank (ADB) to provide expert support during a workshop designed to scale up Nepal's renewable energy sector.

Held in Kathmandu, the ADB workshop convened a wide range of stakeholders and funders, including the Clean Energy Development Bank based in Nepal. Workshop participants examined key issues and challenges Nepal faces in developing renewable energy and energy efficiency projects. Currently, Nepal's power generation is met predominantly by river-run hydropower, which is constrained during dry seasons.

The second primary focus of the workshop addressed the challenges faced by independent power producers (IPPs), in particular issues such as securing financing, accessing debt and equity, and controlling costs.

Support provided through the Solutions Center highlighted the benefits of photovoltaic (PV) systems and how solar technologies can support the power needs of Nepal, especially during dry seasons. The Solutions Center expert, Mr. Toby Couture, also provided advice on the basic structure and design of a successful solar policy.

IMPACT OF ASSISTANCE. Through the collaboration with ADB and the Nepal Government, support provided by the Solutions Center Ask an Expert program will help Nepal make objective, informed decisions on the development and implementation of a solar policy.

With PV costs now broadly competitive, Nepal has an opportunity to deploy solar projects that will provide the country a reliable source of electricity during the dry and sunny seasons when hydropower dependability is compromised. Additionally, IPPs now have the information they need to work toward developing



The Solutions Center collaborated with the Asian Development Bank to assist Nepal in developing and implementing a solar policy. Shown here: Kathmandu, Nepal. *Photo from iStock 37697084*

COMMENT FROM REQUESTOR

“Thank you for your support and for making the expert available. His assistance was very useful and well appreciated by all.”

Jiwan Acharya

Senior Climate Change Specialist (Clean Energy), Asian Development Bank

greater regulatory certainty and a clear framework for selling to the network power generated from PV and other clean energy technologies. IPPs can also structure power purchase agreements to include protections against currency risks and other investment factors.

GUIDING SOUTH KOREA'S RENEWABLE PORTFOLIO STANDARD

The Clean Energy Solutions Center provided the Korea Electric Power Corporation with information on how to successfully meet and exceed renewable energy requirements subsequent to the recent implementation of a national renewable energy portfolio standard (RPS). The request focused not only on how to meet the standard's percentage requirements overall, but also on how to comply with a mandate that a certain amount of renewable electricity generation must be produced within the country.

IMPACT OF ASSISTANCE. Clean Energy Solutions Center policy experts provided guidance to the Korea Electric Power Corporation that will enable it to comply with South Korea's RPS requirement in a way that is most cost-effective for the utility and its customers. The support provided by the Solutions Center will also increase South Korea's probability of successfully meeting or exceeding its RPS targets.



Solutions Center experts provided guidance to help South Korea meet its renewable energy portfolio standards. Shown here: City of Seoul, South Korea. *Photo from iStock 24113173*

Page 1 photo: Solutions Center assistance will help advance industrial efficiency efforts in India. Shown here: Bangalore business district in India. *Photo from iStock 14917539*

To learn more about the Solutions Center and how it can assist you in achieving your policy goals, please visit cleanenergysolutions.org.