

Researcher's eye

The **APEC Peer Review on Low-Carbon Energy Policies (PRLCE)** was endorsed by the APEC Energy Ministers at the 2010 Energy Ministers Meeting. The review is an extension of the APEC Peer Review on Energy Efficiency and follows the same guidelines.

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This report presents the results of a peer review of low-carbon energy policies conducted in Lima, Peru's capital.

The primary accountability for each peer review is shared by the economy being reviewed and the Review Team. The **PRLCE in Peru** was conducted by a team of five experts who visited Peru from 04-08 December 2023. During the visit, the Review Team had a comprehensive discussion on low-carbon energy policies with representatives and experts from government ministries and agencies and private and government-owned companies.

Peru's economy experienced notable growth during the past decade, with mining and agroindustry playing crucial roles. Peru is committed to promoting Low-Carbon Energy, which is reflected in its Nationally Determined Contributions (NDCs). These contributions aim to comply with the agreements and decisions of COP 19, which were ratified during COP 20.

Energy policies establish the government's legal framework, with emphasis on promoting and protecting private investment, minimising social and environmental impacts, and encouraging energy markets. The Peruvian energy sector also promotes energy efficiency and the development of renewable energies at the local, regional, and government levels. The Peruvian energy sector operates within a specific institutional framework that includes various government bodies, regulatory entities, and organisations responsible for overseeing and managing different aspects of the energy industry.

Peru has initiated a movement towards a liberalised energy sector, introducing market-oriented reforms to promote competition, attract private investment, and enhance efficiency in its energy industry. Peru has liquified natural gas (LNG) and renewable energy potentials to be exploited. The economy used the renewable energy auction as the mechanism for developing renewable energy projects to diversify the energy fuel mix of the power sector. These auctions involved competitive bidding processes where renewable energy developers submit proposals to supply a certain amount of electricity generated from renewable sources to the grid. Almost all renewable energy projects that are operating in the domestic electricity grid by mid-2023 were developed using this mechanism. In recent years, new projects solar and wind power plants have been developed independently from these auctions, mostly related to some energy demand projects such as mining.

The economy has made quite a few achievements to improve its low-carbon energy policies. During the peer review, the experts came up with several recommendations that will further help the economy achieve its low-carbon energy goals. Among them were as follows:

- **Establish a formal platform for discussing low-carbon energy policy among all energy sector stakeholders.** Periodical workshops or seminars, publications of special studies, social media, and other tools can be used to disseminate information and promote discussion.
- **Enhancing monitoring and evaluation of the implementation of low-carbon energy policies.** Inadequate monitoring and evaluation mechanisms make it difficult to assess the impact of renewable energy policies accurately. The lack of data for solar water heater deployment, off-grid renewable energy, cogeneration, and distributed generation.
- **Identifying the sectors, processes, and actions that could contribute most to reach a low-carbon economy in Perú,** to understand the challenge and implications of the NDC goals.
- Because the production of hydrogen is promising in Peru, it is recommended that **hydrogen production and market offtakes (customers) be collocated initially.**
- **Invest in energy storage technologies, such as advanced batteries, to store excess energy during peak production times and release it during periods of low production.** This approach would help mitigate the impact of intermittency and contribute to a more stable energy grid. This initiative requires updating the relevant regulatory framework of the electricity market accordingly.
- In relation to Peru's plans to increase low-carbon transportation, **consider a long-term plan for transportation decarbonisation including a target of reducing greenhouse gas (GHG) emissions over time.**
- **Consider reviewing the current tariff structures and regulatory frameworks to incentivise the injection of surplus energy from distributed renewable energy into the grid.** To ensure the sustainability of distributed generation (DG) integration the current regulatory framework should be revisited.