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HARNESSING THE SUN

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Energy access has continued to remain an important pillar of energy sustainability negotiations at the G20. Continuing this tradition, G20 negotiations under Saudi Arabia's presidency this year recognised the importance of off-grid solar solutions for scaling up universal electricity access along with traditional grid-based solutions. There is also an associated emphasis on improving access to microfinance, detailed local planning processes, and dedicated government schemes for closing energy access gaps, among others. As a group of some of the most powerful nations in the world, G20 has the means to provide governmental support to not just member countries but also for all access-deprived regions of the world. However, it could be argued that in order to make effective progress along these lines, there is a need for not just joint political statements, but also a slew of measures that would accelerate this transition. These measures could include adoption of international standards in associated technologies, and the creation of infrastructure that would enable innovative business models for scaling-up pilot projects.

Preparations are already underway for India's accession to the Troika in December 2020. With India hosting the G20 Summit in 2022, it can prioritise many of these aforementioned ideas in its energy access agenda. We argue that given this unique opportunity, time is ripe for amalgamating the agendas of the International Solar Alliance (ISA) and the G20 to harness the full potential of solar energy for improving energy access. It would also lead to the development of bilateral, regional and inter-regional transmission inter-connections that then have the potential to lead to global inter-connection of solar energy resources and transfer technology from one part of the world to another.

Globally, we have made significant progress in achieving universal access to electricity. Despite the gains however, 840 million people still lack access to electricity. Majority of this population is in Sub-Saharan Africa, Asia Pacific, few parts of MENA (Middle East and North Africa), Latin America and the Caribbean region. One of the chronic challenges in the deficit countries is the presence of technically and financially weak power utilities, and lack of enabling policy and effective finance mechanisms for off-grid solutions. Along with technological challenges, there is also a pervasive duality of access options in rural and urban areas. According to a 2019 report by Sustainable Energy for All and Climate Policy Initiative, while 97 per cent of the global urban population enjoys electricity access, the rural population access is limited to only 79 per cent with a mere 2 per cent of the financing dedicated for renewable energy solutions.

Renewables is the only way forward for augmenting the required energy supply without adding to energy security concerns as well as without loading on to the burden of climate change. Global trends also indicate a clear transition from fossil fuel-based energy generation to clean, efficient and environment-friendly renewable energy sources like small hydro, solar and wind. According to a 2019 study by experts at the International Renewable Energy Agency (IRENA), renewable energy can supply two-thirds of the total global energy demand and contribute to the bulk of greenhouse gas emissions reduction that is needed between now and 2050 for limiting average global surface temperature increase below 2 degrees Celsius. However, in order to achieve the above transition, both conventional and innovative policy designs and regulatory frameworks are essential.

The ISA reflects this need for the establishment of a cohesive and robust global body which can achieve the goal of climate change mitigation, keeping both countries' renewable energy

commitments and actions voluntary and need-based. While G20 member countries also progress through a similar voluntary access plan, the nested agenda of G20 countries and the ISA is also going to add a new dynamism to energy diplomacy in the 21st century. Along with regional cooperation, ISA can also help address other questions like technology transfer, storage system, and financial assistance to member countries. In fact, already working on those lines and in order to make the process feasible, the ISA is planning to set up a World Solar Bank to exclusively finance energy access in member countries.

In recent years, renewable energy witnessed an increase in installed capacity by 7 per cent globally, and solar power has attracted the largest share of new investments in renewable energies for the ninth year in a row. One of the major reasons for the wide scale acceptance of solar power as an alternative source is its wide availability and affordability. Despite the growth in the renewable energy sector, a 2018 report by the International Energy Agency painted a worrisome picture about how the growing demand for energy is exacerbating the risk of climate change. The report further added that the year 2018 witnessed an increase in CO2 emissions by 1.7 per cent to a historic high of 33.1 Giga-tonnes (Gt) CO2. Out of the 33.1 Gt CO2, coal use in the power sector alone accounted for 30 per cent of the emissions, mostly in transitional and emerging economies. While these economies are in a continuous turf war between improving the standards of living and access to clean, reliable and affordable energy, solar energy has emerged as a promising option to satiate both the needs.

To ensure the availability and accessibility of affordable energy services in a carbon constrained world, India jointly with France launched the ISA at the 2015 Paris climate conference. The ISA is the first international organisation headquartered in India and aims to promote solar electricity in the sunshine belt states between the tropic of Cancer and Capricorn. ISA countries are mostly located across the regions of Africa, Asia-Pacific, Latin America and Caribbean, Europe. Out of these four regions, the first three regions were also continuously discussed among the G20 countries. The regions of Sub-Saharan Africa (Turkey 2015), Asia Pacific (China 2016), Latin America & Caribbean (Argentina 2018) and Middle East and North African region (Saudi Arabia 2020) have been consistently highlighted in G20 meetings through Voluntary Action Plans. These plans build on the linkages between energy access and encourage other agendas such as collection and dissemination of energy data, coordination between international energy agencies, and also try to bridge the energy access gap through coordination between G20 countries and the above-mentioned regions. Since there is a synergy between the agenda of G20 countries and ISA, perhaps it would be worthwhile to link up the agenda of ISA and G20 negotiations for the greater good.

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