



GLOBAL SOLAR COUNCIL POLICY

Introduction

The Global Solar Council (GSC) represents more than 40 national and regional solar associations from both established and emerging markets and 2,000 companies across the solar supply chain. The GSC's vision is to ensure that solar energy becomes the leading contributor to the world's energy system with 100% renewable energy in the power sector. Its mission is to encourage the rapid and wide-scale adoption of solar energy through cooperation, education and training. Solar PV and other solar technologies have the potential to protect the climate, secure energy supply and create wealth, jobs and other economic opportunities.

The International Renewable Energy Agency's recent report Renewable Energy and Jobs – Annual Review 2016, identifies solar PV as the largest renewable energy employer with around 3 million jobs worldwide, an 11% increase over 2014. In recognition of solar PV's immense potential for job creation, the GSC has set a target of 10 million solar jobs by 2030, which will result in trillions of dollars in long-term, stable investments and multiple terawatts of PV generation. To achieve this goal, the GSC will promote the following policy positions and recommendations for action and implementation.

Recognize that solar PV is a low-cost, reliable and clean source of energy

Over the term of its expected useful life, solar PV is a low-cost investment, particularly in relation to current primary sources of energy generation using fossil fuels or nuclear power. It is a proven technology which can be scaled quickly. Solar PV is also linked with a broad value chain, creating local jobs and local income. It is environmentally sustainable and opens new economic perspectives, thus enabling independence from fossil fuels. Solar PV is one of the best tools available to fight climate change and replace carbon-based energy sources—it should become a principal source of electricity generation around the world.

The COP21 outcomes in December 2015 were a clear success. Recognizing the importance of solar PV to achieving the Paris targets, it will be essential that national governments develop ambitious and binding policies which accelerate the adoption of solar PV, including innovative solar PV funding policies and mechanisms. Those policies and mechanisms are needed as long as energy markets are distorted by fossil subsidies, do not incorporate CO₂ emission prices and inappropriate market designs for distributed renewable energy.

The regulation of local energy markets must not block a self-sustained technology offtake, e.g., in areas where Independent Power Producers (IPPs) have limited market access or in markets where self-consumption or the use of storage is restricted. Policy makers should take active decisions against such restrictions and establish a level-playing field through measures such as fixed kWh-based remuneration,

reverse auction tenders, free access to balance power and other ancillary services markets and public loans for banks, investors and end-users.

High fossil fuel subsidies impede a level playing field for solar PV and other renewable energy sources. GSC recommends policy makers remove fossil fuel subsidies and transfer those means into support for PV and other renewables. Each dollar invested in solar PV will be transformed into local value and jobs. If a rapid exit from fossil fuel subsidies is not possible, e.g., for social reasons, an exit plan should be implemented that provides a clear pathway for the investment community.

Regulation should be also liberalized in a way that gives solar PV equal access to markets and electrical networks. Governments and regulators should take every possibility to educate stakeholders on the unique attributes of solar PV across multiple end-uses. National solar programs should include campaigns, training and study programs and governments at all levels should utilize public grounds and buildings as showcases to highlight the latest solar PV technologies.

Utilize solar PV to alleviate poverty and enforce participative structures

Solar PV has become cost competitive to or cheaper than fossil fuel options in many grid and off-grid areas around the world. Solar PV payback times are below five years in many countries. Nevertheless, the mass adoption of solar PV in rural and low-income communities remains constrained by upfront capital costs. In addition, even when mini-grid or off-grid PV systems are economically viable and funding available, limitations for IPPs, restricted competition amongst utilities and unreliable grid planning can impede the adoption of solar PV.

Policy makers can counteract these difficulties in rural and low income communities with enforcing participative structures. Governments should promote rural electrification through innovative funding models, grants or credit lines. Governments should also enforce long-term grid planning with reliable timelines to make off-grid investments more secure. Where necessary, off-grid market access should be regulated to encourage solar and other renewable energy generation. Solar PV generation has no fuel costs so lifetime generation costs are known and fixed – for developing countries especially this provides long term certainty on energy costs.

Enhance energy security through solar PV

Solar PV is a local resource, available anywhere in the world at reliably low prices for decades into the future, with predictable yields and a distributed structure that is well protected against external threats. Solar PV also helps nations diversify their energy supply and gain independence from energy imports or from single sources. It relieves the consumption of finite energy resources which is already limiting the economic growth and the growth of energy demand in developing countries.

Beyond power, solar PV unfolds even more potential by coupling efficiently with other energy sectors such as heating, cooling and mobility where a transition towards renewable energy is also necessary. Solar PV can also be combined with other renewable energy sources such as solar thermal, biomass or wind energy in order to increase the renewable shares and improve the security of supply and certainty of costs.

Build capacities in the solar sector to anchor the energy transition

The value of solar PV is both immediate and long term. But its deployment requires strong stakeholder structures, and adoption of best practices for deployment is a key goal of the GSC. Only with an active PV industry representation, education facilities, competent regulators and academic institutions will solar PV disseminate sustainably and be anchored in existing and developing structures. With strong government and broader support, stakeholder organizations such as the GSC will help increase local knowledge on solar PV and deliver valuable input to PV policy making and delivery of on the ground positive results.

The GSC will continue and increase its efforts at collaboration and dialogue with governments and other stakeholders on increasing PV deployment and building private-public partnerships to enhance knowledge transfer and greater international cooperation.

Develop, implement and promote internationally-recognized solar codes and standards

The GSC is at the forefront of those in our industry deploying high quality solar PV components which safe and deliver long-term, reliable yields. On a global scale we strongly encourage the best tools for ensuring product safety and quality through the adoption of solar-related codes and standards covering PV systems and their installation, buildings and grid integration. Uniformity of quality and deployment standards will help ensure efficiency, system compatibility and safety. Codes and standards also have the ability to lower costs through harmonization and to harvest the added system value of solar PV in the energy system. The GSC is driving processes to ensure Governments, industry, codes and standards development bodies, testing institutes and inspection authorities work together to create universal internationally compatible codes and standards and disseminate related materials to national control authorities.

Another important aspect of standardization is the harmonization of contracts and other project documents. IRENA, the Terawatt Initiative (TWI), a GSC partner organization, and the GSC are developing the Solar Energy Standardization Initiative to bring together a group of public and private sector stakeholders to define and agree upon the terms of a standard documentation for solar projects that would be effective and generally acceptable by finance institutions. The GSC fully supports this initiative and will continue to contribute to its development.

Recommendations

The GSC recommends that governments, regulators, industry, grid operators, energy providers and other stakeholders co-operate to:

1. Ensure markets are re-designed to give solar PV equal access and are appropriate and sustainable for distributed renewable energy.
2. Remove market distortions and provide access to secure financing of solar PV investments such as through Feed-in-Tariffs (FITs), reverse auctions, PPAs, grants and loans.
3. Implement a stable and consistent regulatory environment and oppose measures which destroy the profitability of investments and the confidence of new investors.
4. Encourage self-sustaining PV business models and remove restrictions on solar and energy storage self-consumption for individuals and businesses.
5. Introduce building codes that incorporate solar PV.

6. Transform the national and trans-national electricity networks to encourage a diversified mix renewable generation technologies such as solar PV.
7. Using the strength of government financing instruments and capacity to mitigating risk, and to lower the cost of capital and scalability of renewable energy investments
8. Empower local financial and other institutions such as local government or community bodies to become participants in renewable energy investments.
9. Create facilities dedicated to scaling up renewable energy investment.
10. Support the GSC in providing education and information to finance, insurance, regulatory and certification bodies in order to improve the bankability of solar PV.
11. Establish public-private partnerships to help build stakeholder capacities in the solar and energy storage sectors.
12. Set an adequate price on carbon and promote regulated carbon markets to ensure we account for the full external costs of pollution.
13. Develop clear and acceptable exit strategies and concrete milestones for the transition from fossil fuel based energy by the transformation of the electricity and other energy sectors to a renewable energy based system
14. Recognize the added system value of solar PV such as auxiliary services, i.e., create a progressive framework for harvesting those benefits and promote the development of innovative technologies that help stabilize grids, systems and markets
15. Develop next-generation transmission, distribution and mini grids designed fully around deployment of distributed renewable energy.