

INTERNATIONAL RENEWABLE ENERGY AGENCY

Eleventh meeting of the Council

Abu Dhabi, 24 – 25 May 2016

Note of the Director-General

Renewable Energy and Jobs – Annual Review 2016

1. The macroeconomic, social and environmental benefits of renewables are increasingly relevant for countries exploring ways to stimulate growth while reducing the adverse impacts of climate change. The knowledge base on these topics, however, remains relatively limited and dispersed. To bridge this gap, IRENA started analysis on Renewable Energy Benefits in 2011. The Agency's work highlights the potential of renewables for economic growth, industrial development and job creation. In particular, IRENA has developed an authoritative and up-to-date knowledge base on employment in the sector that also supports informed policy-making (see Suggested Readings, below).

2. Through its Renewable Energy and Jobs – Annual Review series, IRENA provides a yearly analysis on the employment in the renewable energy sector. In its second edition, launched in 2015, IRENA estimated that nearly 7.7 million people were employed in the sector in 2014 (in addition to 1.5 million in large hydropower). The third edition of the Annual Review will be released to Members during the eleventh meeting of the Council. The report will update IRENA's estimate for employment in the sector, as well as discuss key regional and global trends related to renewable energy jobs.

3. The preliminary findings of the Annual Review indicate that jobs in the renewable energy sector continue to grow and that markets and employment are characterised by a number of key factors:

- Enabling policy frameworks remain a key driver for employment, as illustrated by the continuation of the Production Tax Credit (PTC) in the United States, the ambitious solar targets in India, and the PV feed-in-tariffs in Japan.
- Greater deployment, mostly in Asia, and sluggish markets in Europe, continue to drive regional shifts in job creation, particularly in solar PV.
- Increasing labour productivity and automation, such as in PV and bioenergy, are slowing growth in employment. As a result, and even though annual growth in job creation has been lower than in previous years, it remains in stark contrast with depressed labour markets in the broader energy sector.
- While employment trends in large scale projects are dynamic, decentralised and off-grid applications offer great opportunities for job creation. The rooftop solar market in the United States, for instance, supports a thriving industry. In Bangladesh, extensive implementation of off-grid solar home systems have resulted in job opportunities for installers, distributors and manufacturers.
- As countries pursue greater integration of renewable energy in the national energy mix, skill gaps are limiting growth in certain markets. Effective scale up of renewables requires early anticipation of skills demand, and concerted efforts for capacity building at both individual and institutional levels.

- Mainstreaming gender in the renewable energy sector can substantially increase the pool of talent and help address the skill shortages in the industry. Data is extremely scarce, with some evidence of an increase in the share of women in solar employment in the US, for example. This year, IRENA's selected industry survey will shed some light on the participation of women in the renewable energy labour force.

4. The growth of renewable energy over the past decade has already led to significant job creation in the sector. Looking forward, IRENA's latest report *Renewable Energy Benefits: Measuring the Economics* estimates that doubling the share of renewable energy in the global energy mix can lead to more than 24.4 million jobs in the renewable sector in 2030. In order for these benefits to materialize, Government leaders will need to create enabling policy frameworks that attract developers and encourage investments in all segments of the renewable energy value chain.

Questions for discussion

- Given Member States experience, which policies and measures have been most effective in creating renewable energy jobs?
- Which technologies and segments of the value chain (e.g. manufacturing, installations, operations and maintenance) has offered greater opportunities for job creation in Member States?
- How do Member States anticipate meeting education and training requirements for the renewable energy sector? Is the lack of skills considered an important issue in up-scaling renewables?

Suggested reading

[Renewable Energy Benefits: Measuring the Economics](#) (2016)

[Renewable Energy and Jobs – Annual Review](#) (2015)

[Renewable Energy and Jobs – Annual Review](#) (2014)

[The Socio-economic Benefits of Solar and Wind Energy](#) (“EconValue”, 2014)

[Renewable Energy and Jobs](#) (2013)

[Renewable Energy Jobs & Access](#) (2012)

[Renewable Energy Jobs & Access - Case studies](#) (2012)

[Renewable Energy Jobs: Status, Prospects & Policies](#) (2012)