

# REVIEW

## FOR PARLIAMENTARIANS

A PERIODIC BRIEF ON RENEWABLE ENERGY

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#### SPECIAL EDITION: 2017 IRENA LEGISLATORS FORUM

On 13 January 2017, the International Renewable Energy Agency (IRENA) held its second Legislators Forum in Abu Dhabi, United Arab Emirates, in conjunction with the Agency's seventh annual Assembly. Parliamentarians interested in renewable energy gathered from 15 countries and the European Union<sup>1</sup>, to discuss best practices, opportunities and challenges in promoting renewables, and ways to establish an enabling legal framework. [[Press release](#)]

The discussions took place against the backdrop of the UN Sustainable Development Goals (SDGs) as well as the Nationally Determined Contributions (NDCs) within the framework of the Paris Agreement. [[Agenda of the 2017 IRENA Legislators Forum](#)]

#### Pre-Legislators Forum visits on 12 January



*Some participants to the Legislators Forum at Masdar City*

This year, the day prior to the Legislators Forum, pre-meeting visits were organized for participants who had arrived early in Abu Dhabi. A group of legislators was greeted by H.E. Dr. Amal Al Qubaisi, Speaker of the Federal National Council (FNC), and by several members of the FNC, and received an exclusive tour explaining the history of the institution. This visit and reception was followed by a guided tour of Masdar City, and a reception at IRENA Headquarters. Legislators were welcomed by IRENA's Deputy Director-General, and presented with a brief of the Agency's mission and programmatic activities. [[IRENA Presentation](#)]

<sup>1</sup> Argentina, Belgium, Burkina Faso, the European Union, Germany, Ireland, Italy, Jordan, Mauritius, Mexico, Serbia, Sierra Leone, Tanzania, Tunisia, Uganda, and the United Arab Emirates

# WHY RENEWABLE ENERGY MATTERS?

## FACTS & FIGURES

- » Renewable power capacity has accounted for **more than half of capacity additions in the global power sector since 2011**
- » Renewable power generation capacity grew at a record pace of **8.6% in 2015, to reach 28.9% of global generation capacity.**
- » With every doubling of cumulative installed capacity, prices fall by **20% due to economies of scale and technology improvements**
- » Renewable energy is **cost-competitive and the socially, economically and environmentally preferred choice in many parts of the world**
- » Employment in the global renewable energy sector rose to **9.4 million direct and indirect jobs in 2015, while jobs in the broader energy sector fell.**

The Paris climate agreement and the adoption by the United Nations of the Sustainable Development Goals in 2015 provide strong political signals and framework for accelerating the deployment of renewable energy in national contexts. IRENA's Director-General stressed that 2015 had also been a record-breaking year for renewables with a USD 305 billion invested in the sector worldwide.

Driven by a rapid decline in costs, and remarkable progress in technological innovation and enabling policy frameworks, renewables have overtaken capacity

additions of any other source of energy in the global power sector.

"Renewables have now become a business that generates economic benefits such as employment, growth and reduced carbon emissions. So we have a very positive vision ahead of us", Mr. Amin said. [Setting the Scene - Remarks by Mr. Adnan Z. Amin, Director-General, IRENA]

Driven by a rapid decline in costs, and remarkable progress in technological innovation and enabling policy frameworks, renewables have overtaken capacity addition of any other source of energy

This statement was reinforced by H.E. Dr. Thani A. Al Zeyoudi, UAE Minister of Climate Change and Environment, who gave an overview of the UAE's recently published Energy Plan, which sets a target of 44% of energy production from renewables and a cut in emissions by 70% by 2050. The country expects this strategy to result in a saving of about USD 190 billion, which will offset roughly by USD 55 billion the expenditures in energy for domestic power generation over the same period of time.



H.E. Dr. Amal Al Qubaisi, Mr. Adnan Z. Amin, H.E. Dr. Thani Al Zeyoudi

# ENGAGING WITH KEY ACTORS ON POLICY

The crucial role that legislators play in translating renewable energy policy into actionable measures was highlighted during the opening session of the meeting by H.E. Dr Amal Al Qubaisi, Speaker of the UAE Federal National Council (FNC), H.E. Dr Thani Al Zeyoudi, Minister of Climate Change and Environment for the UAE, and Mr. Adnan Z. Amin, the IRENA Director-General.

[\[Welcome address by Mr. Adnan Z. Amin, IRENA Director-General\]](#)

[\[Speech by Dr. Amal Al-Qubaisi\]](#)

[\[Speech by Dr. Thani A. Al Zeyoudi\]](#)

“We, as parliamentarians, have a moral, ethical and practical responsibility, not only to support renewable energy agreements and goals, but to ensure their full implementation through appropriate legislation and oversight”, stated Dr. Al Qubaisi, “the time has come for us in parliaments to take the leadership and begin to action these agreements and goals. To do so will require true partnerships between parliaments and other branches of government, and key international organisations, such as IRENA”.

IRENA’s Director-General added that holding the Legislators Forum in conjunction with the Agency’s annual Assembly offered a unique opportunity to strengthen this dialogue and collaboration between policy and decision makers. Many participants of the Legislators Forum also attended IRENA’s seventh session of the Assembly to follow discussions on current trends of the global energy transition and engage with other decision makers, experts and stakeholders. The Assembly convened more than 150 country delegations and 130 other entities.

Parliamentarians can be a key driving force in the years to come, and Mr. Amin recalled the central role lawmakers had played in the creation of IRENA itself. He reminded participants that the idea of setting up an inter-governmental agency with a view to accelerating the global energy transition was initiated by active members of the Bundestag and renewable energy champions a decade ago.

Participants highlighted consistently that parliamentarians were not only responsible for the formulation of legislation, but also the approval of national budgets. They noted the need for members of

parliaments be better informed about renewable energy in order to better support the development of the sector through relevant legislation and allocation of resources.

The time has come for us in parliaments to take the leadership and begin to action these agreements and goals

During the meeting, IRENA was called upon to expand its engagement with members of parliaments and, in addition to holding an annual Legislators Forum in Abu Dhabi, to look at ways to actively participate in regional parliamentary meetings to disseminate knowledge and up-to-date information on the latest trends in the renewable energy sector in terms of costs, jobs, technology, policy and finance.



*Cesar Rendon, Member of Parliament, Mexico*

Parliamentarians also recognised their responsibility in advocating for renewable energy in their constituencies, as key to raising awareness about the socio-economic benefits of renewable energy and gathering the necessary public support for a global and sustainable energy transition. As in last year’s Legislators Forum, participants agreed that parliamentarians also hold a unique position in society that allows them to show leadership in bringing together all relevant stakeholders, such as from the private sector, civil society and academia.

[\[2016 IRENA Legislators Forum Summary Report\]](#)

# ENABLING POLICY INSTRUMENTS

## KEY TRENDS

Policies to create markets for renewable energy technologies have facilitated deployment and enabled cost reductions through economies of scale and technology improvements.

By the end of 2015, renewable energy support policies were in place in 164 countries, covering electricity generation, heating and cooling, and transport.

Policy makers have devised a wide variety of policies to promote deployment, including, regulatory instruments and fiscal incentives, as well as enabling conditions for sector development, related to grid access, finance and socio-economic benefits.

To accelerate the pace of deployment, in line with global sustainable development objectives, policies will remain crucial to address prevalent market specific barriers.



A series of policy instruments to support the energy transition were presented based on recent analytical work by IRENA, including feed-in tariffs (FITs), auctions, and target setting. [\[Presentation by IRENA Secretariat\]](#)

Participants stressed the importance of moving towards a comprehensive mix of policy instruments, which also accounts for different market sizes and segments. In this context, flexible policies to respond to changing market conditions was noted to be crucial for supporting renewable energy deployment and effectively integrating growing shares of renewables into the energy mix. Sharing their national experiences and discussing the applicability of best practices, several participants also highlighted the fact that policy choices had to be understood within a specific national and historical context. [\[Presentation by Mr. Andries Gryffroy, member of the Flemish Parliament, Belgium\]](#)



*Andries Gryffroy, Member of Parliament, Flanders (Belgium)*

Ms. Bärbel Höhn, member of the German parliament and former State Minister, recalled that FITs had been introduced in Germany as a market-creating measure to accelerate renewable energy deployment. The support policy allowed a decentralisation of electricity production giving non-utility actors, such as citizens, the possibility of becoming 'prosumers' (producers and consumers). As renewables have become more cost-competitive and markets have matured, Germany has begun to introduce auctions as a measure to support renewable energy deployment.

Exchanging national experiences in introducing auctions for renewable energy deployment, several legislators highlighted the importance of ensuring fair and inclusive



*Bärbel Höhn, Member of Parliament, Germany*

competition by addressing the risk of auctions being monopolised by a small number of big companies. On the other hand, the risk of under-bidding, and its subsequent failure to deliver capacity additions as needed, was also recognised. Experts advised that such risks could be addressed through careful auction design, including the eligibility criteria, the selection process of winning bids, and sellers' liability.

Ms. Georgina Trujillo, member of the Mexican Congress and President of the Energy Commission, detailed the Energy Reform introduced by her government in 2014, which sets a target of reaching 50% of clean energy sources in the national energy mix by 2050. Auctions have been a central pillar of the reform, and are contributing, alongside other elements of the Energy Transition Law (e.g. development of a National Programme, creation of an advisory Council for Energy Transition and a Sustainable Energy Fund, fiscal incentives) to what is considered as a positive experience only two years since its introduction.

[\[Presentation by Ms. Georgina Trujillo, member of the Congress, Mexico\]](#)



*Georgina Trujillo, Member of Parliament, Mexico*

Jordan also was cited for having established a successful auctioning system with the objective of supporting renewable energy deployment and promoting energy security. Tendering for small power plants was also introduced to open the market to small investors.

Additionally, several legislators urged their colleagues to ensure that they consider policies for the integration of variable renewable energy in the power sector and the market as a whole. They expressed that policies also needed to consider deployment opportunities across the three end-use sectors, including transport and heating and cooling, to achieve a deep and comprehensive energy transition. Some highlighted that policy tools were not sufficient anymore at this stage, and that policy makers had to design a new market system that could effectively integrate growing shares of renewable energy.

Participants encouraged IRENA to continue its analytical work on renewable energy policies, focusing on the different end-use sectors.



*Kathleen van Brempt, Member of the European Parliament, reporting back to IRENA seventh Assembly on the 2017 Legislators Forum*

# FINANCING MECHANISMS

## KEY TRENDS

Attracting sufficient financing is a key condition to scale up renewable energy investment and harness wider socio-economic benefits. Investment in renewables has to increase significantly above current levels, which can be driven by the private sector interest in assets that promise long-term, stable returns.

In many markets with high renewable energy potential, market barriers and the perception of high risk prevent private investors from participating more actively in renewable energy finance.

Investment in renewable energy can be scaled up rapidly to accelerate the global energy transition if the right policy and financial instruments are used.

In their presentations and remarks, experts emphasised that public funding alone would be insufficient to drive the global energy transition at the scale and speed required to achieve international commitments; the bulk of the renewable energy sector's financing would have to come from the private sector.

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Participants agreed that the increase in renewable energy investments required in developing countries represented a particular challenge. Private low cost capital relies on the credit record of a country, which in developing countries is often affected by political risks and poor payment records under power purchase agreements (PPAs) between the utility (often government-owned) and investors. Many agreed that legislators had a specific role to play in addressing these

issues by ensuring that the necessary legal framework to protect investors against political and other risks were in place. One example that was provided identified the relevance of land tenure legislation for deploying renewable energy.

IRENA was called upon to examine ways to assist developing countries in increasing their credit rating through national legal and regulatory frameworks.

In light of the broad consensus that renewables are key to the realisation of the objectives of the UN Sustainable Development Goals and the Paris Agreement, some members of parliament also suggested that a new financing mechanism dedicated to renewable energy should be established. Such a system would focus on offering guarantees for capital invested in renewable energy projects.



*Leila Ouled Ali, Member of Parliament, Tunisia*

The Green Climate Fund (GCF) was mentioned as a potential source of funding for risks mitigation in order to leverage private capital investments in developing countries. Several participants, however, noted the difficulties for developing countries to access those funds due to the rather complex procedures in place. According to some, the involvement of third parties between the GCF and countries meant that the sums allocated were substantially reduced in the process.

In some countries, participants reported that PPAs and off-take guarantees have started to impact national budgets, and that these fiscal burdens had begun to be passed on to the consumers in the form of higher electricity prices, seriously undermining the objective of broadening public support for renewable energy. The introduction of a carbon emissions permit market or a carbon tax was suggested as a tool to bridge the gap between budgetary expenses and off-take guarantees.

[\[Presentation by IRENA Secretariat\]](#)

[\[Presentation by Mr. Michael Eckhart, Citi Group\]](#)

# IN-FOCUS: ENERGY ACCESS

## KEY TRENDS

Over a billion people in rural and peri-urban areas live without electricity access, and around 2.9 billion rely on traditional fuels for cooking/heating. Gaining access to modern energy services would have an immediate and transformative impact on their livelihoods.

Access to modern energy is an enabler of increasing productivity, rising incomes, improving food and water security, and enhancing access to health and education to mention a few. Unless the issue of access to energy is resolved, meeting the *Sustainable Development Goals* will be almost impossible.

In order to achieve universal access to electricity by 2030, 60% of new power generation will have to come from off-grid solutions both stand-alone and mini-grids. Placing a focus on this topic had been specifically requested by participants to the first Legislators Forum.



Dhamir Mannai, former Member of Parliament, Tunisia

Rebecca Kadaga, Speaker of Parliament, Uganda

Following a presentation on the latest studies by IRENA on promoting off-grid renewable energy deployment [[Presentation by IRENA Secretariat](#)], Harish Hande, founder of SELCO, a social enterprise in India specialised in providing solar-based energy services to the poor and to businesses, urged parliamentarians to learn not only from successes but also from mistakes. “Energy is such a diverse product; it answers to the needs that are very

culturally driven, so it needs to be customised [...] You don’t need engineers to work in rural areas, you need solution providers.”

Former Tunisian MP, Dhamir Mannai, who also participated in the Ministerial Roundtable on energy access during the Assembly, stressed that renewables were the only source of energy that could be decentralised. Now that the technology was available, it was important to focus specifically on the social dimension of the issue. “The no-electricity scenario has the most devastating impacts on the socio-economic aspects and no matter how expensive electricity is, it is not more expensive than the consequences of not having access to electricity”, he said.

Referring back to the climate change issue, some underlined that as many developing countries were only responsible for a minor share of global greenhouse gas emissions, so access to electricity had to be the most compelling argument. Parliamentarians were thus called upon by one of the participant to act on three fronts to support renewable energy market development: draft and vote enabling laws, de-risk investments, and put in place the necessary regulatory and institutional framework for implementation.

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Several members of parliament recalled the importance of public support to accelerate the deployment of renewable energy technologies. Legislators therefore expressed their need to be supported in their efforts to make the case for renewable energy through the sharing of up-to-date information, along with more direct legislative assistance.

## HOW TO SUPPORT PARLIAMENTARIANS?

Participants were presented with an array of tools that can support them in their legislative function with a view to identifying analytical work and activities that can provide added value to parliamentarians' legislative work.

[\[Presentation by IRENA Secretariat\]](#)

[\[Presentation by Dr. Michal Nachmany, Grantham Institute, LSE, London\]](#)

[\[Presentation by Mr. Nicholas Dunlop, Climate Parliament\]](#)



*Richard Ottinger, former Congressman (USA), Professor, Pace Law School*

Throughout the day, legislators expressed the need to have access to comparative studies in terms of legislative and regulatory frameworks or to have access to a database listing all the renewable energy laws. Whilst noting that renewable energy policy could not be a one-size-fit-all and that country specifics had to be considered, certain elements were said to be replicable.

Members of parliament called for analytical work to reflect successes as well as failures of certain renewable

energy laws. The need to have information on the financial impact of those laws was also underlined. One participant suggested that IRENA conduct an analysis on fair and equitable sharing of costs and savings across society, an issue that is of particular interest to parliamentarians who want to promote renewable energy.

Some insisted that the most urgent need was to receive support and advice on how to overcome resistance against the transition to renewable energy. Knowing the problems encountered in other parliaments and how they are being tackled could be helpful. International meetings, such as the Legislators Forum, are important in this regard. Many said that the added benefit of such meetings was to meet other renewable energy champions, the opportunity of which is more scarce in a national context, and to report back home about the actual broad support for the deployment of renewables.

Setting up national and regional cross-party networks was also strongly encouraged to address issues that are more country-specific and to strengthen the political support for renewables.

Participants called on IRENA to continue to hold the Legislators Forum and to enlarge the group of participants. It was also suggested that the Legislators Forum becomes a platform where vision and long-term strategies can be elaborated by parliamentarians, in support of governments' mandates.

[\[VIDEO: 2017 IRENA Legislators Forum\]](#)



*Stella Bianchi, Member of Parliament, Italy*



*Samir Murad, Senator, Jordan*



*Johann Saathoff, Member of Parliament, Germany*

# PAST ISSUES

## REVIEW FOR PARLIAMENTARIANS: A PERIODIC BRIEF ON RENEWABLE ENERGY



### ISSUE 1- SOLAR PV POWER GENERATION

This first issue of REview for Parliamentarians examines the development in renewable energy and places a particular focus on solar PV power generation, a renewable energy technology that has emerged rapidly.

[Français](#) [Español](#)



### ISSUE 2 - RENEWABLE ENERGY AND THE CLIMATE CHANGE ISSUE

Issued in the aftermaths of the Paris Agreement, this issue of the REview for Parliamentarians analyses renewable energy as a mitigation tool for climate change.

[Français](#) [Español](#)



### ISSUE 3 - DECLINING COSTS AND JOBS CREATION

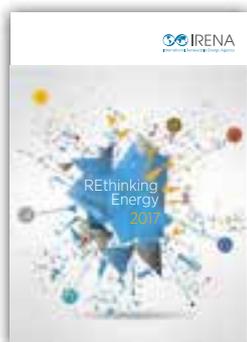
The renewable energy sector has become a significant employer, with the potential for adding millions of jobs worldwide in the coming years. This dynamism is partly triggered by the unprecedented cost decrease in the sector.

[Français](#) [Español](#)

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## SELECTED PUBLICATIONS



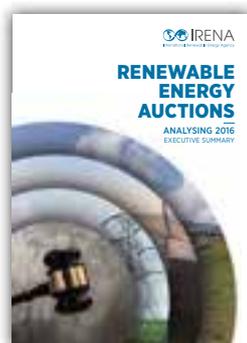
### RETHINKING ENERGY 2017: ACCELERATING THE GLOBAL ENERGY TRANSFORMATION

REthinking Energy, the flagship report from the International Renewable Energy Agency (IRENA), examines trends and developments in the global quest for a sustainable energy future. As this third edition emphasises, accelerated deployment will fuel economic growth, create new employment opportunities, enhance human welfare and contribute to a climate-safe future.

Renewables, consequently, are crucial for sustainable development, including the pursuit of SDG 7, the United Nations-adopted goal of ensuring “affordable, reliable, sustainable and modern energy for all”. Policies and regulations remain crucial to establish a stable and attractive market for renewable energy. Strong government commitment is needed to reduce risk and lower the cost of financing.

In the power sector, breakthroughs in complementary systems, in particular storage, will enable the integration of larger shares of renewable electricity. Off-grid renewables – via both stand-alone systems and mini-grids – can increasingly complement grid-based options to expand sustainable energy access.

Global investment in renewables has shown steady growth for more than a decade, rising from less than USD 50 billion in 2004 to a record USD 348 billion in 2015.



### RENEWABLE ENERGY AUCTIONS: ANALYSING 2016 (EXECUTIVE SUMMARY)

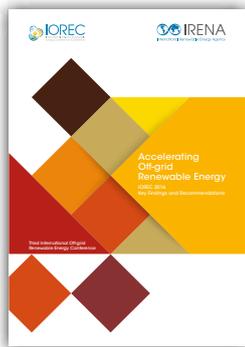
At least 67 countries had used auctions for renewable energy contracts by mid-2016, up from less than 10 in 2005. The forthcoming report from the International Renewable Energy Agency (IRENA) – of which this summary provides a preview – provides key updates on this crucial mechanism for price discovery and market development.

The report follows IRENA’s earlier studies:

- Renewable Energy Auctions: A Guide to Design (2015)
- Renewable Energy Auctions in Developing Countries (2013)

Average contract prices fell to USD 50 per megawatt-hour (MWh) for solar and USD 40/MWh for wind power in 2016, compared to USD 250/MWh and USD 85/MWh, respectively, in 2010. Chile, Mexico, Morocco and the United Arab Emirates achieved record price lows with solar and wind auctions in 2016.

Along with falling technology costs, policy support and improved access to finance have helped accelerating renewable energy development.



## ACCELERATING OFF-GRID RENEWABLE ENERGY: KEY FINDINGS AND RECOMMENDATIONS FROM IOREC 2016

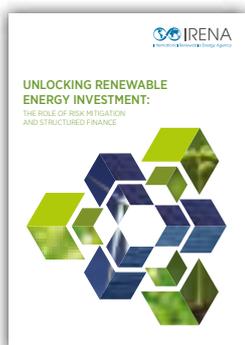
The business case for off-grid renewables as a means to expand rural electricity access keeps growing stronger, thanks to steady cost reductions and technological innovation. Yet further accelerating the growth of either mini-grid or stand-alone solutions will depend also on stable policies and regulations, along with dedicated funds and de-risking instruments for renewables.

Technology and business innovation could cut the costs of renewable power generation for mini-grids by 60% in 20 years, according to this conference report from the International Renewable Energy Agency (IRENA). Yet around 600 million people are still expected to lack electricity access in 2040, despite international goals to ensure sustainable energy for all.

The third International Off-grid Renewable Energy Conference (IOREC), held in Nairobi, Kenya, in 2016, identified eight priorities:

- Mainstreaming off-grid renewable energy in national rural electrification strategies;
- Creating an ecosystem to accelerate deployment;
- Designing dedicated policies and regulations;
- Unlocking capital for energy access;
- Identifying the right business models for deploying off-grid renewables;
- Innovating to improve accessibility, reliability and range of electricity services;
- Strengthening sustainable energy access and maximising benefits;
- Harnessing the cross-sector development impact of off-grid renewables.

In order to help meet the UN Sustainable Development Goals adopted in 2015, off-grid solutions must be designed in ways that extend beyond the addition of energy generation capacity to achieve improvements in people's livelihoods.



## UNLOCKING RENEWABLE ENERGY INVESTMENT: THE ROLE OF RISK MITIGATION AND STRUCTURED FINANCE

Scaling up renewable energy calls for mobilising a massive investment increase. Renewables bring far reaching benefits in terms of human health, energy access, environmental protection and the response to climate change, along with the potential to create new jobs around the world. Amid rapidly falling technology costs, meanwhile, renewable energy technologies have become increasingly cost-competitive with fossil fuels, even amid low global oil prices.

Yet global investment in renewables has remained far below its potential, as this report from the International Renewable Energy Agency (IRENA) explains. The investment shortfall reflects enduring market barriers and perceptions of high risk that deters private investors and financiers.

Unlocking Renewable Energy Investment: The role of risk mitigation and structured finance identifies the main risks and barriers limiting investment; it also supplies a toolkit for policy makers, public and private investors, and public finance institutions to scale up their investments in renewable energy.

For more: [www.irena.org/publications](http://www.irena.org/publications)

# ANNOUNCEMENT

## SAVE THE DATE



**2018 IRENA LEGISLATORS FORUM**  
**12 JANUARY 2018**  
**ABU DHABI, UNITED ARAB EMIRATES**

If you are interested in participating, send an email now to [legislators@irena.org](mailto:legislators@irena.org)  
and join us in 2018 for the third edition of the Legislators Forum.

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