IRENA
INNOVATION DAY 2019

Session II: Technical feasibility of a 100% renewable energy system by 2050

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FP-UNA - CONSTRUYENDO EL FUTURO

1. How to replace the current non-renewable installed power capacity?

(2018) – 171 GW (RE based) and less than 100 GW (N-RE based)

But, the current installed power capacity (N-RE based)
4700 GW (nuclear included)

2. How to deal with a run of natural gas to increase its share of future power generation?

	Renewable Energy	Natural Gas
2019	26%	19%
2050	35%	35%

Source: US Energy Information Administration (2017). International Energy Outlook

Estimated LCOE for new generation resources in 2019

	2012 U$ per MWh	U$ per MWh
Conventional Coal	96	
Gas Combined Cycle	66	
On-shore Wind	80	56 (*)
Solar PV	130	81 (*)
Solar CSP	243	

Sources: MIT (2015), The future of Solar Energy.
(*) IRENA (2019), A Roadmap to 2050.

3. Engagement of users and producers

4. Radical change of paradigm

ENGINEERS

ENERGY POLICY AND PLANNING MAKERS

USERS

Aguije
Thanks

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NÚCLEO DE INVESTIGACIÓN EN RECURSOS NATURALES Y ENERGÍA