

# Presentation of the Renewable Global Future Report

**Ms. Lins** (Secretary General, REN21)



# RENEWABLES GLOBAL FUTURES REPORT

## GREAT DEBATES TOWARDS 100 % RENEWABLE ENERGY



**Christine Lins**

Executive Secretary

[christine.lins@ren21.net](mailto:christine.lins@ren21.net)



**REN21** is a **global multi stakeholder network** dedicated to the rapid uptake of **renewable energy worldwide** based at UN Environment.

**NGOs:**

ALER, CURES, GFSE,  
Gogla, Greenpeace,  
ICLEI, ISEP, Renewable  
Energy Institute,  
RCREEE, SLoCaT, WCRE,  
WFC, WRI, WWF

**Science & Academia:**

IIASA, ISES, NREL, SANEDI, TERI,  
Fundacion Bariloche

**International**

**Organisations:**

ADB, EC, ECREEE, GEF,  
IEA, IRENA, UNDP,  
UNEP, UNIDO,  
World Bank

**Industry Associations:**

ACORE, ARE, CEC, CREIA,  
EREF, GSC, GWEC, IGA,  
IHA, IREF, **RES4MED**, WBA,  
WWEA

**National**

**Governments:**

Brazil, Denmark,  
Germany, India,  
Norway, Spain,  
UAE, US, UK



# REN21 Renewables 2017 Global Status Report

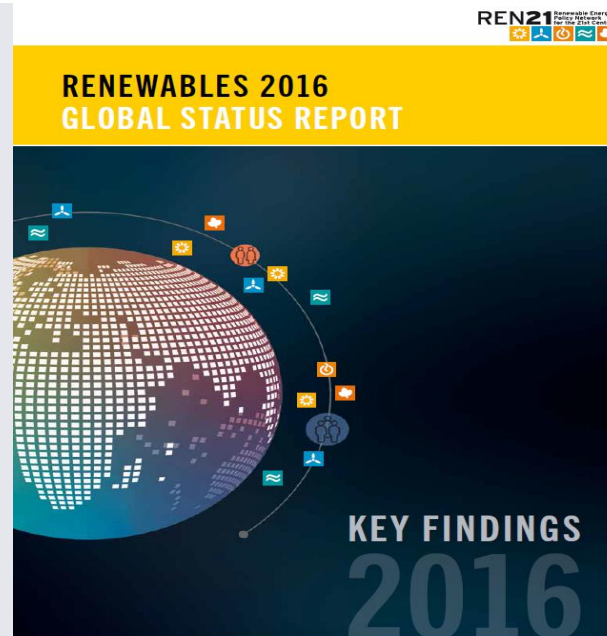
## → The report features:

- Global Overview
- Market & Industry Trends
- Distributed Renewable Energy for Energy Access
- Investment Flows
- Policy Landscape
- Energy Efficiency
- New: Enabling technologies

## → The report covers:

- All renewable energy technologies
- Power, heating & cooling, and transport sectors

## → Report release at CEM8 on 7th June in Beijing

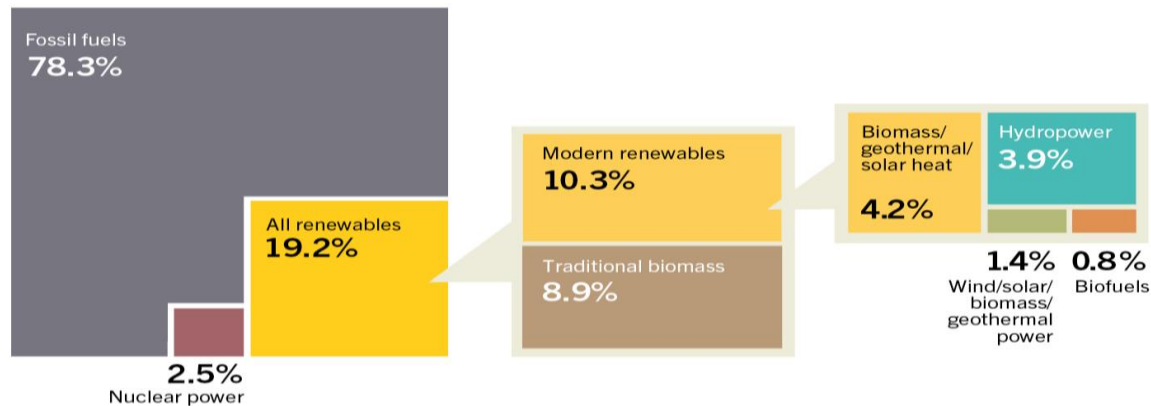


# Renewable Energy in the World

Renewable energy provided an estimated **19.2% of global final energy consumption** in 2014.

Share of modern renewable energy increased to 10.3% while the share of traditional biomass was of 8.9%.

Estimated Renewable Energy Share of Global Final Energy Consumption, 2014

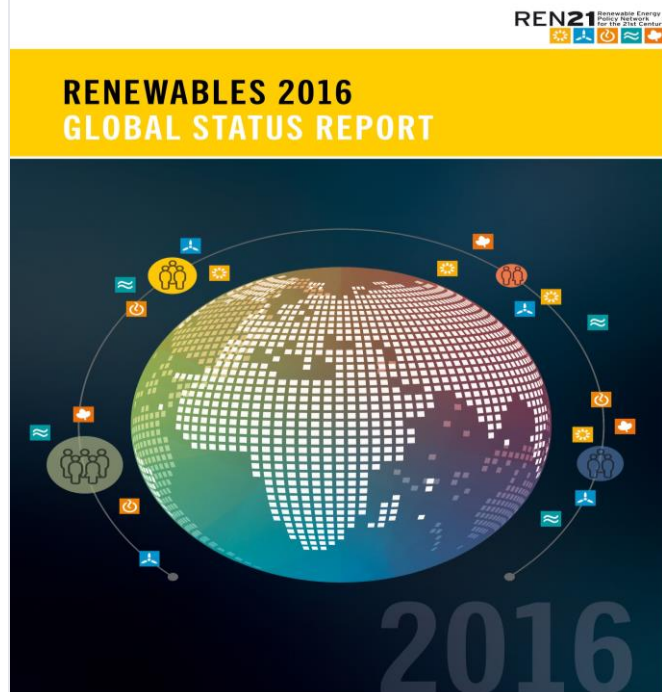


REN21 *Renewables 2016 Global Status Report*



# 2016 in a nutshell

- **Largest global capacity additions** from renewables to date.
- **Investment** in renewable energy globally was **at USD 242 billion** (for the fifth consecutive year, investment in new **renewable power capacity** was roughly **double** that in **fossil fuel generating capacity**).
- 2016 was third year in a row: **global carbon emissions** associated with energy consumption **remained stable** while the global economy grew.



# 100% Renewables: Pipe dream or reality?

- 114 experts interviewed
- Conservative, moderate, progressive perspectives
- Giving their opinion on:
  - feasibility of 100% renewable energy future
  - macro-economic impact of such a future
- All regions of the world represented
- Not prescriptive but a starting point for debate
- 12 Great Debates



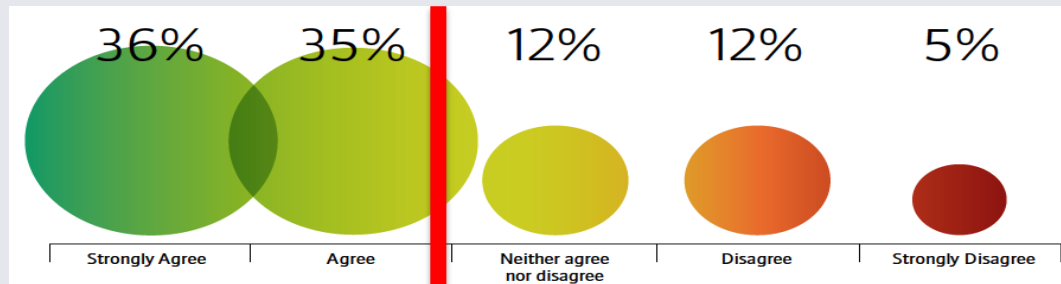
# Overview of the Results – the 12 Great Debates

1. 100% Renewables: A logical consequence of the Paris Agreement? .....
2. Global Energy Demand Development: Efficiency on a global level? .....
3. Renewable Power Generation: The winner takes all? .....
4. The Future of Heating: Thermal or electrical applications? .....
5. Renewables for Transport: Electrification versus biofuels? .....
6. Interconnection of Sectors: System thinking required .....
7. Storage: Supporter or competitor of the power grid? .....
8. Technology versus Costs: Which should come first? .....
9. Scaling-up Investments and Work Force: 100% renewables for socio-economic change .....
10. Utilities of the Future: What will they look like? .....
11. Mega Cities: Mega possibilities .....
12. Energy Access Enabled Through Renewables: How to speed up connections? .....

# 1. 100% Renewables: A logical consequence of the Paris Agreement?

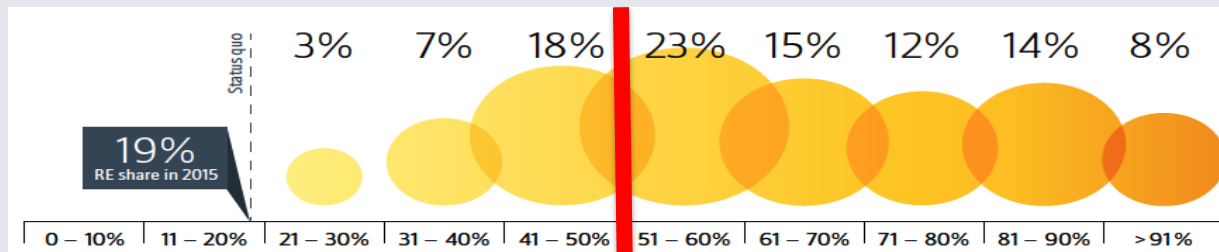
Is the transition to 100% renewables on a global level feasible and realistic?

71% agree with this statement



What will be the share of global renewable final energy consumption by 2050?

72% of the experts expect RE share will double or even triple with the next 3 decades.

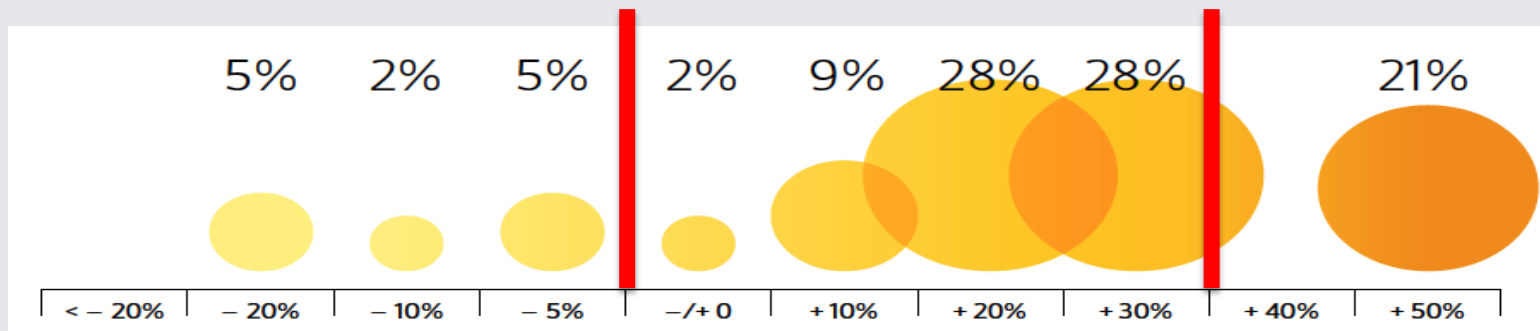


## 2. Global Energy Demand Development: Efficiency on a global level?

To what extent will global final energy demand increase or decrease by 2050?  
(Compared to 2015 in %)

14% believe energy demand will not grow any further

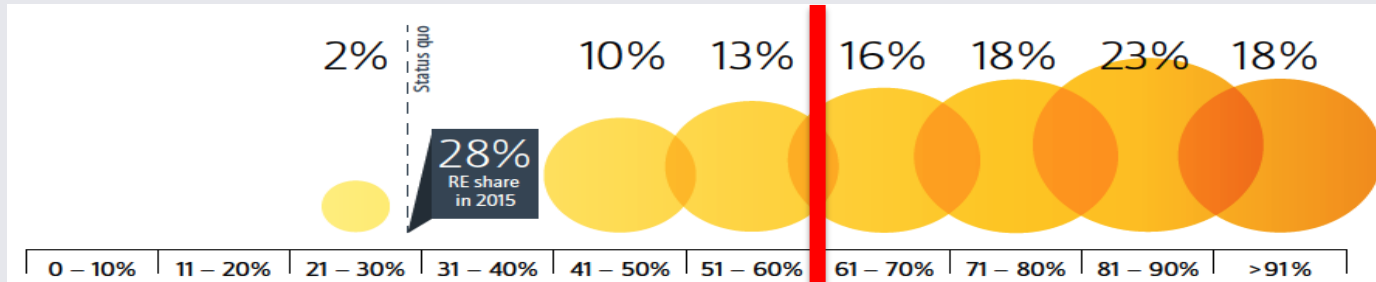
65% expect the energy demand will increase by about 1/3 by 2050.



### 3. Renewable Power Generation: The winner takes all?

What will be the estimated development of global renewable power generation share by 2050?

65% expect that renewable power generation will more than double within 30 years

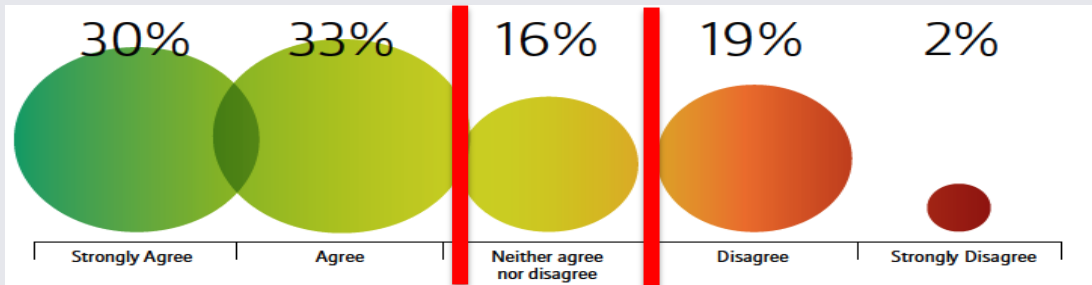


### 3. Renewable Power Generation: The winner takes all?

Will decentralised power generation dominate over centralised generation by 2050?

63% expect decentralised generation to dominate over centralised plants

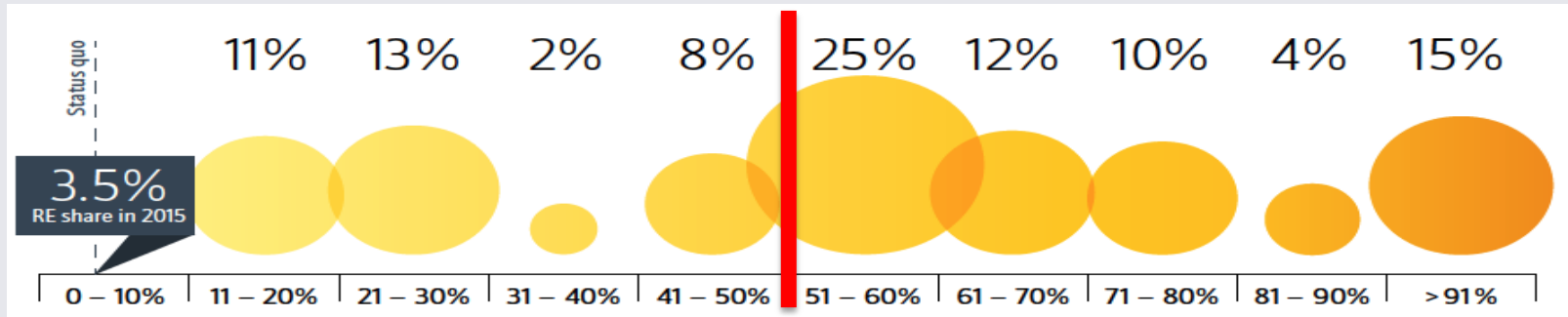
21% disagree



## 5. Renewables for Transport: Electrification versus biofuels

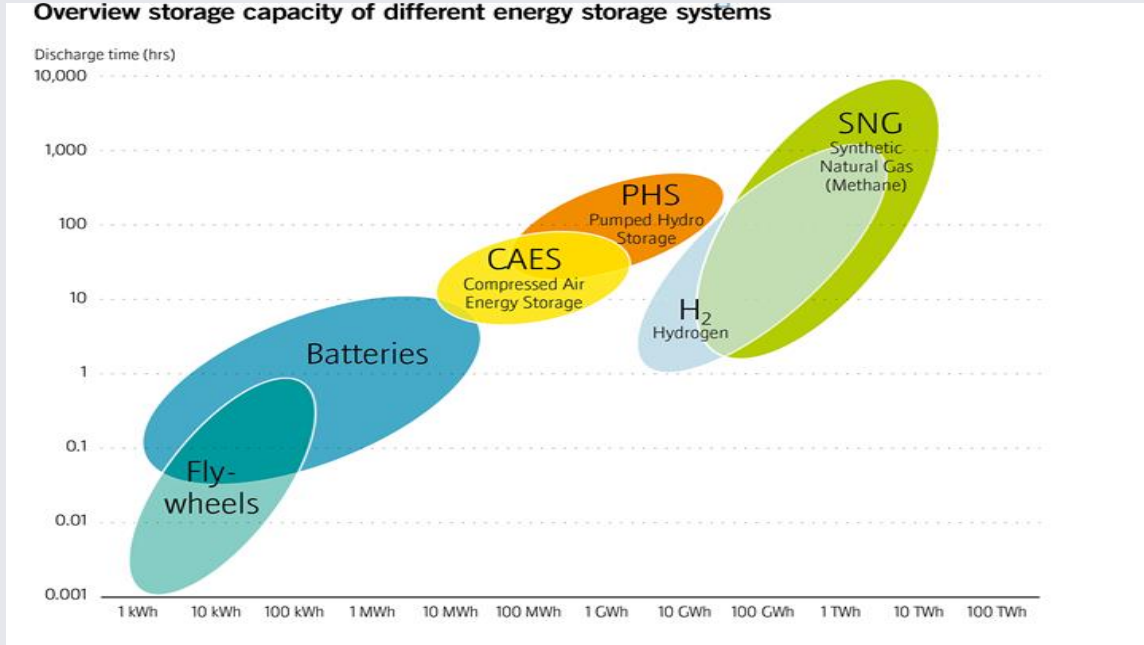
What will be the share of global renewable transport energy consumption by 2050?

2/3 of all interviewed experts expect the renewable energy share to grow by a factor of 14 by 2050.



# 7. Storage: Supporter or competitor of the power grid?

Various storage technologies for various purposes. There is no “on-size-fits-all” application.



# In Conclusion

- More than 70% of the experts interviewed consider a global transition to 100% renewable energy to be both feasible and realistic.
- There is an overwhelming consensus that renewable power will dominate in the future, with many noting that even large international corporations are increasingly choosing renewable energy products either from utilities or through direct investment in their own generating capacity.
- Numerous companies, regions, islands and cities have set 100% renewable energy targets.



## In Conclusion (2)

- **2/3 of the experts expect renewables to outpace the fossil fuel industry within one decade:**
  - Fossil fuel (infrastructural) projects need 5 to 10 years from the first proposal, to planning, approval process, construction till production start.
  - In case renewable costs will develop as expected by most experts, the project will be uneconomic from the first day of production.
- While most experts see a 100% renewable energy supply as technically and economically realistic, its unclear if this will be reached by 2050 or later.
- Unclear if the rapid RE market up-scaling will develop fast enough to avoid dangerous climate change.

We need an informed debate about the energy future so that can governments adopt the right policies and financial incentives to accelerate infrastructure investments, thereby facilitating large-scale renewable energy deployment.

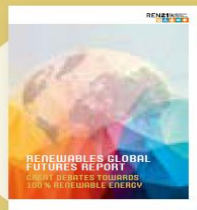
# REN21 Products



RENEWABLES GLOBAL  
STATUS REPORT [GSR]



REGIONAL REPORTS



GLOBAL FUTURES  
REPORTS [GFR]



[www.ren21.net/map](http://www.ren21.net/map)

RENEWABLES  
INTERACTIVE MAP



RENEWABLES ACADEMY



INTERNATIONAL  
RENEWABLE ENERGY  
CONFERENCES [IREC]

[www.ren21.net/gfr](http://www.ren21.net/gfr)

Subscribe to our newsletter  
[www.ren21.net](http://www.ren21.net)

RENEWABLES GLOBAL FUTURES REPORT  
GREAT DEBATES TOWARDS 100 % RENEWABLE ENERGY