



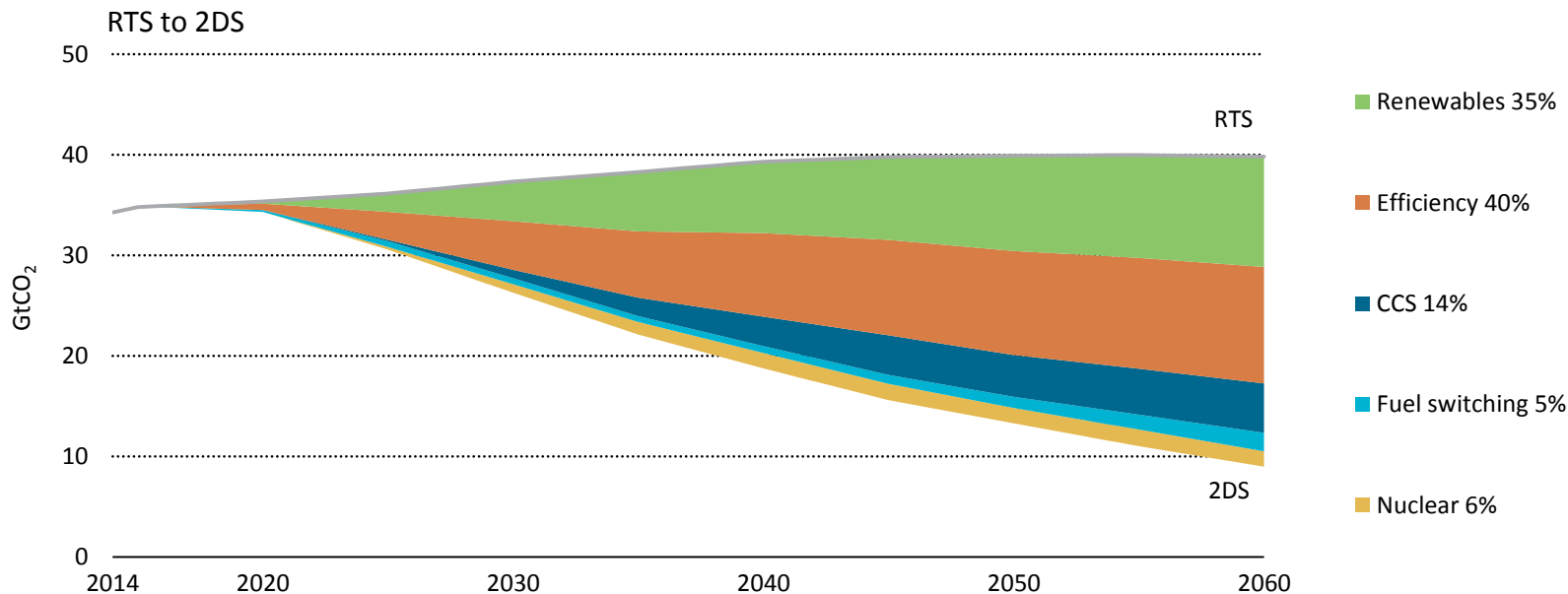
# Aligning renewable energy and energy efficiency policies

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# Energy efficiency and renewables are key to the energy transition

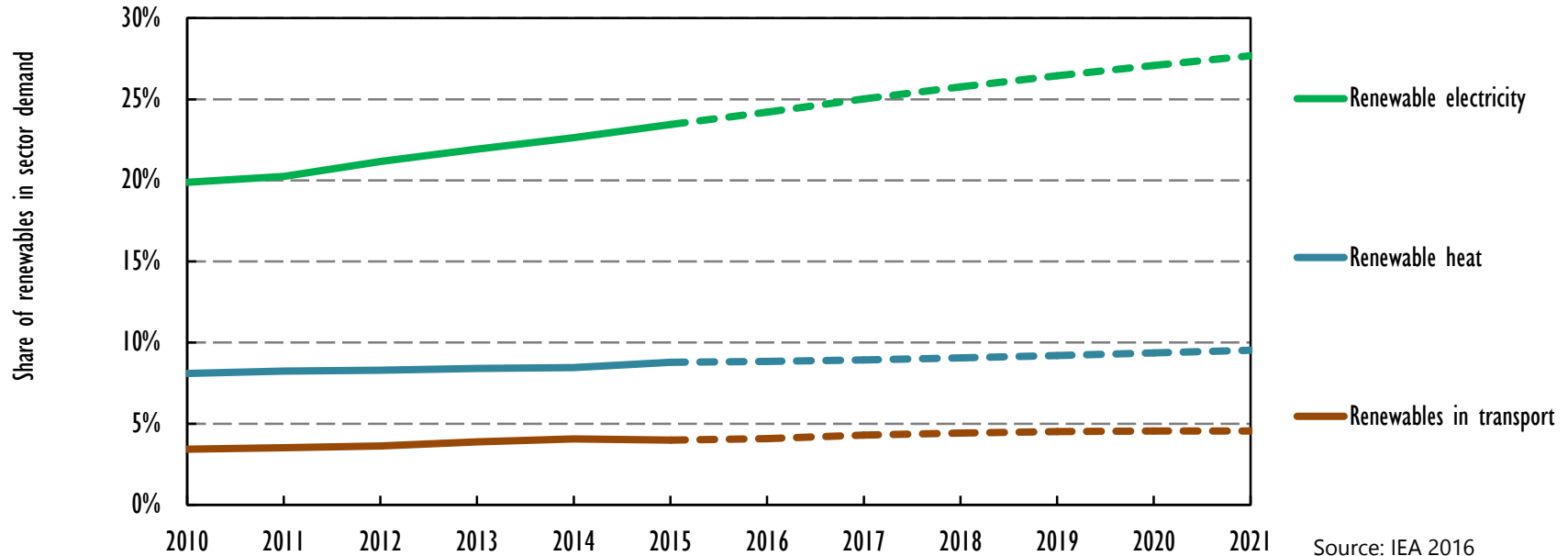


RTS – Reference Technology Scenario, 2DS – 2 Degrees Scenario

Source: IEA Energy Technology Perspectives 2017

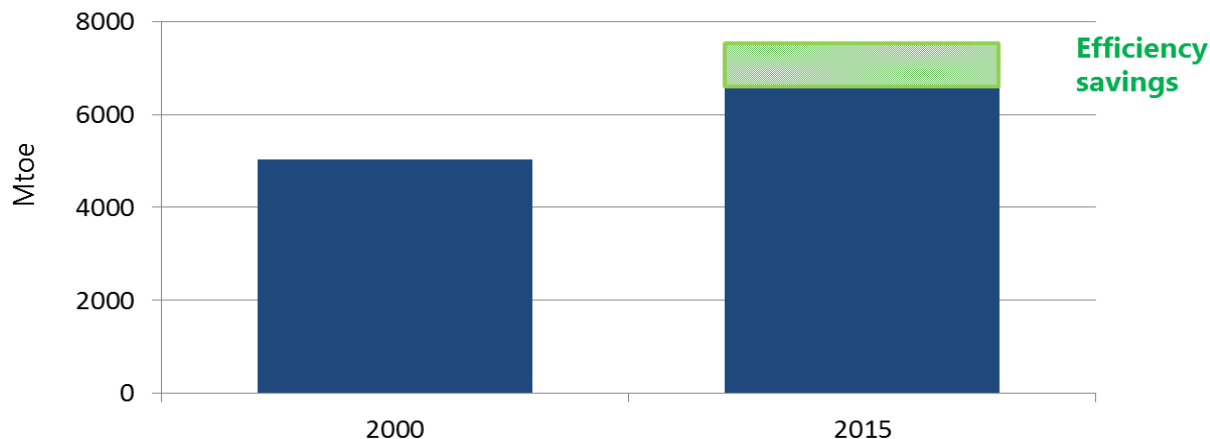
**A big scale-up in both energy efficiency and renewables is needed which will require effective policy intervention.**

# The share of renewables is growing



**Rapid deployment in electricity, less progress in heat and transport**

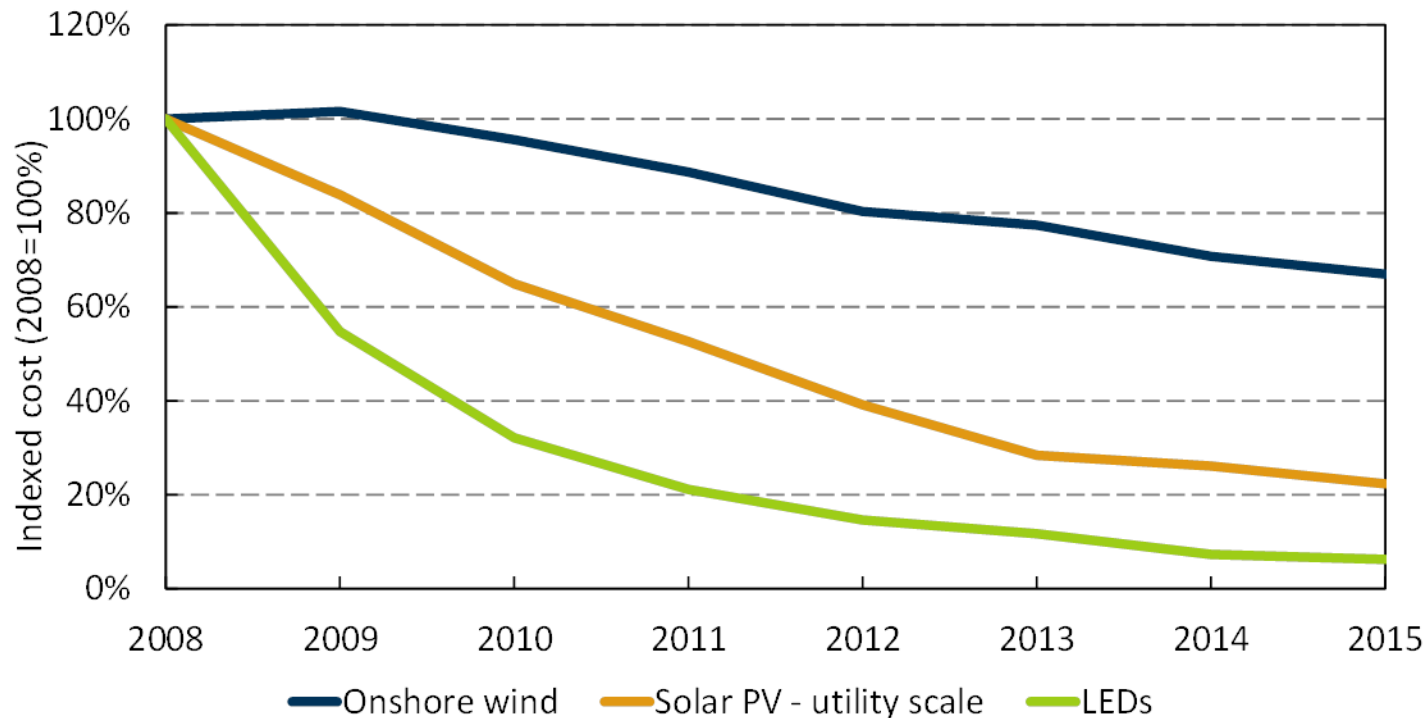
## Final Energy consumption and savings in G20



Source: IEA 2016

**Without efficiency measures, energy demand in G20 countries would be 13% higher. In many countries, demand is going down.**

# Energy efficiency and renewables are increasingly cost-effective



**Climate and energy policies have worked to dramatically reduce clean energy costs in some (but not all) key technologies**

- Germany *Market Incentive* programme for buildings – extra incentives for combined measures
- France *Zero Rate* loans for bundles of measures for building renovation
- Sweden carbon/energy taxes – encourages switch to energy efficiency and renewable heat
- EU *Nearly Zero Energy* Buildings from 2020
- Chile – subsidies for energy efficiency and efficient, low pollution wood stoves to combat air pollution
- Any UNECE regional examples?



- Energy efficiency can undermine renewable energy business models that presume demand growth.
- Costs to maintain existing assets as demand reduces – e.g. district heating grids
- Surplus cheap clean power available at certain times – investments in storage more valuable than energy efficiency
- Should it always be 'energy efficiency first?'



- To date, policies for renewable energy and energy efficiency have generally been distinct from each other.
- This approach risks sub-optimal outcomes or contradictory signals.
- Increasing recognition of the need for a more integrated policy approach that looks at demand and supply together.
- This will be required to accelerate deployment and increase investment.



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## *Participants:*

- Ministers and high-level officials from Australia, Brazil, Denmark, China, Germany, Indonesia, South Africa, Sweden
- Others include World Bank, Engie, Danfoss, California Energy Commission, World Energy Council, Pacific Gas and Electric Company

## *Key findings:*

- Need to move to energy services
- Improved market design
- Create a level playing field





**Over to you!**