

SEE THE LIGHT

The sustainable building conference for professionals

GEARING UP FOR 2020

13 NOV 2015

Ireland's Energy Trends

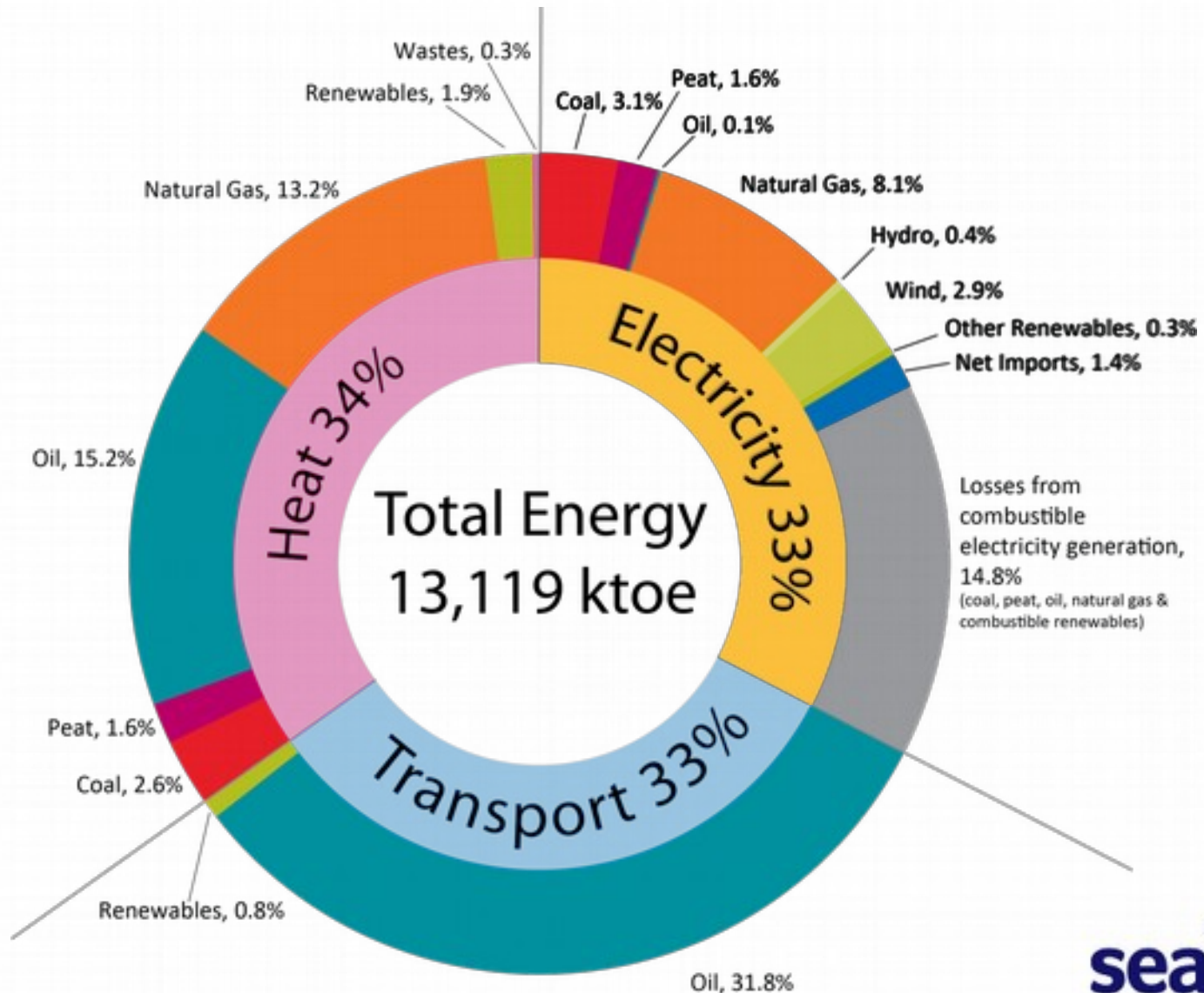
Context for Buildings

Martin Howley – Energy Policy Statistical Support Unit

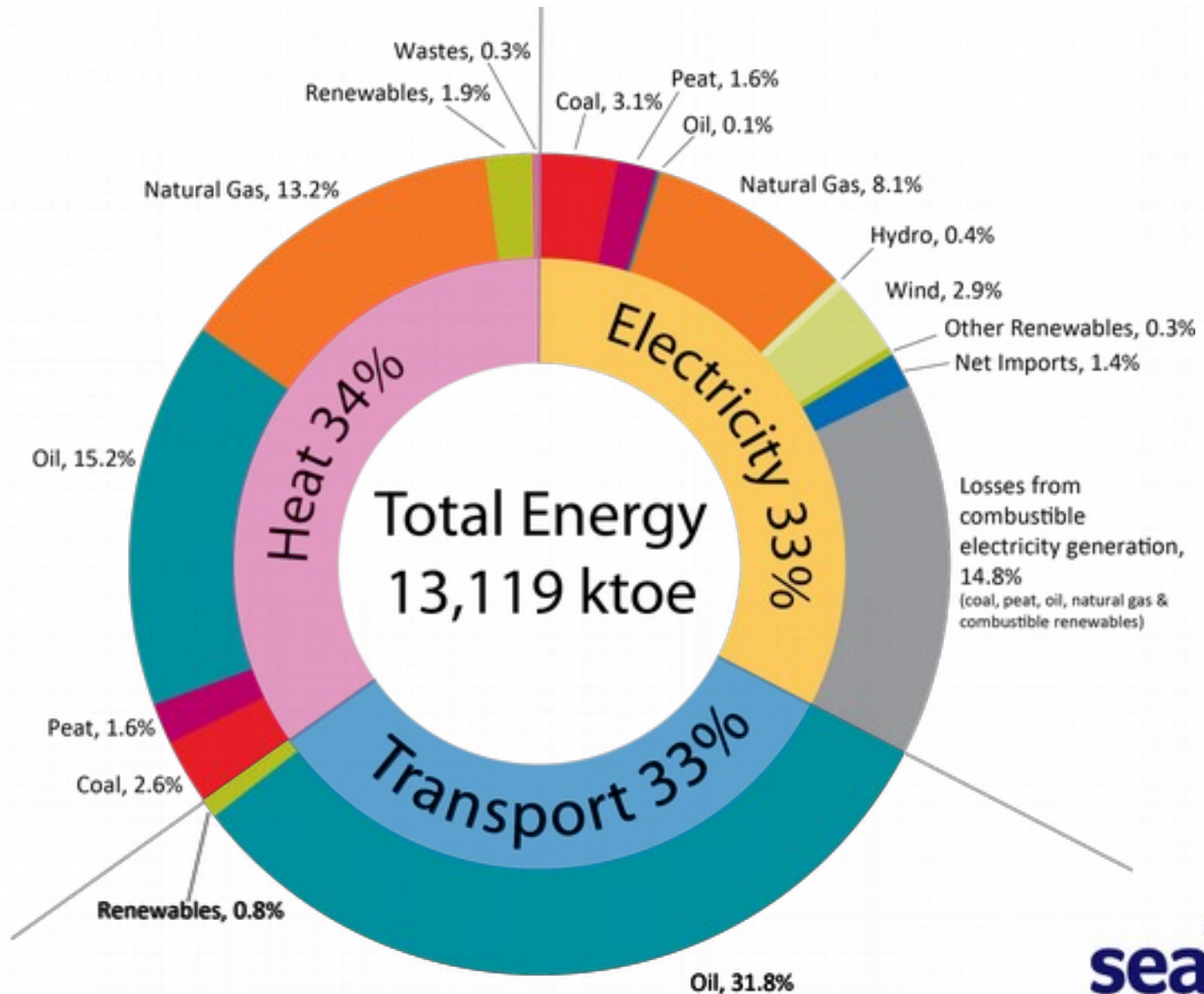
Where we are today



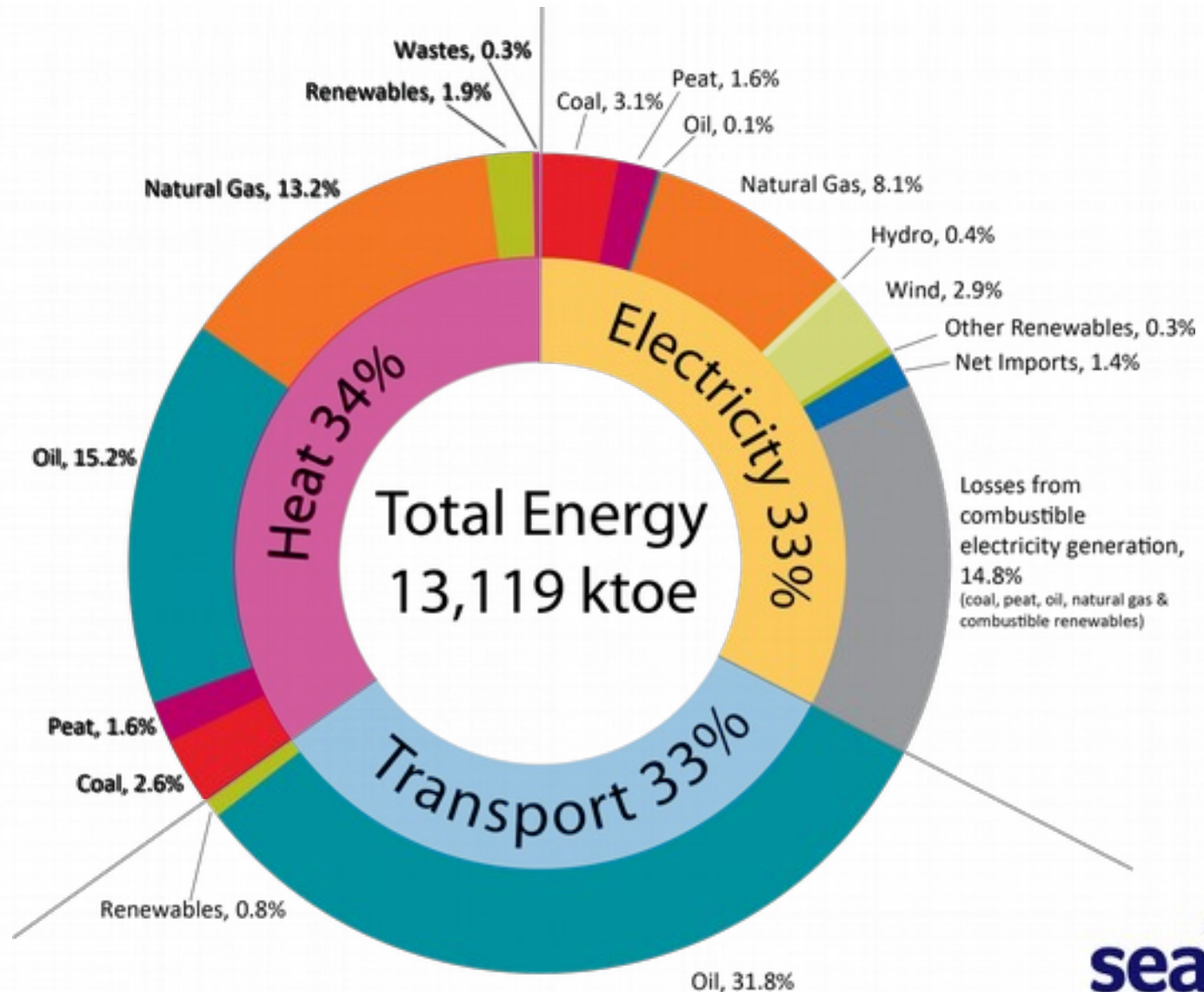
Primary Energy and Modes of Energy Use



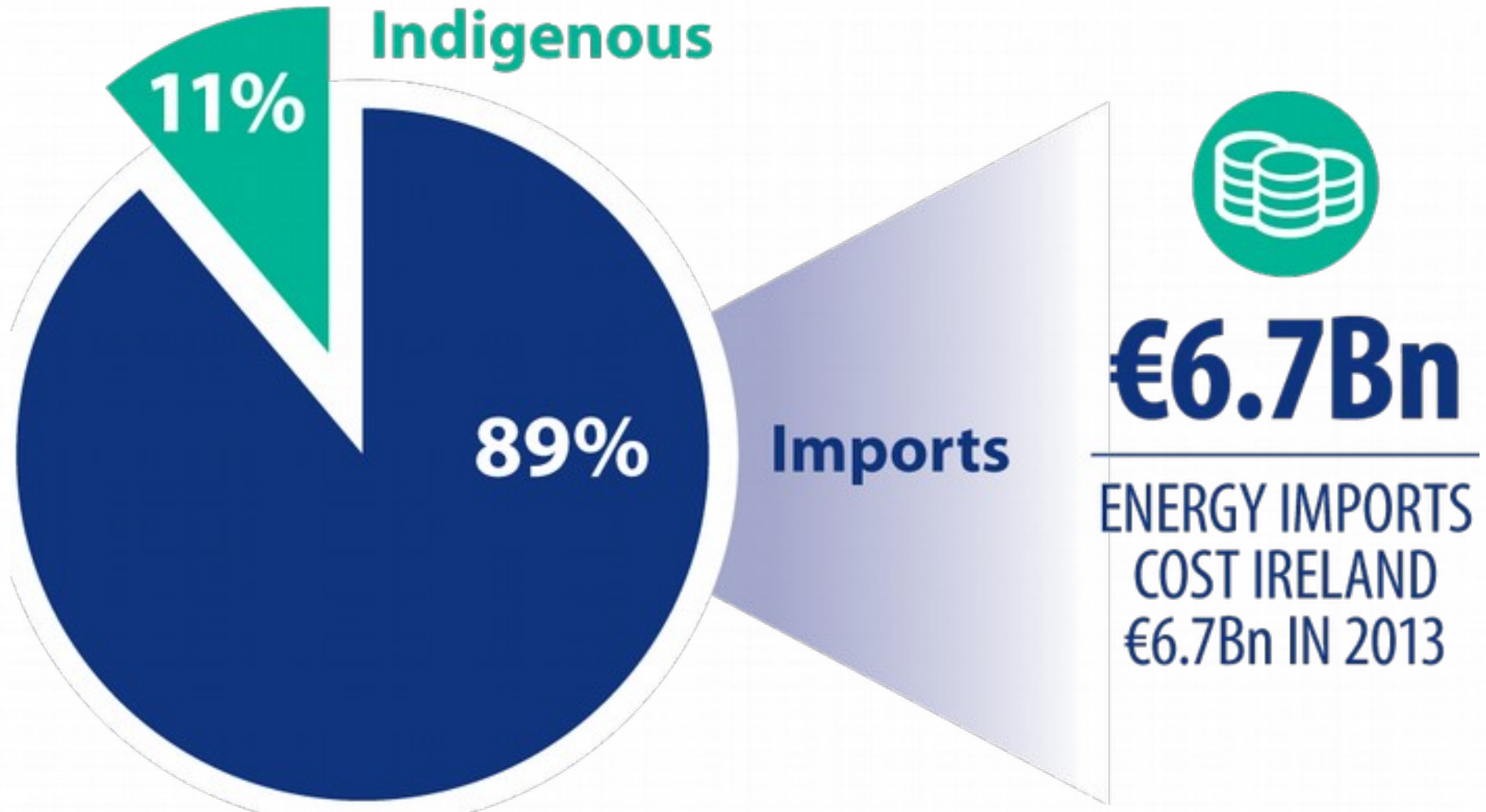
Transport & Renewable Energy Sources RES-T



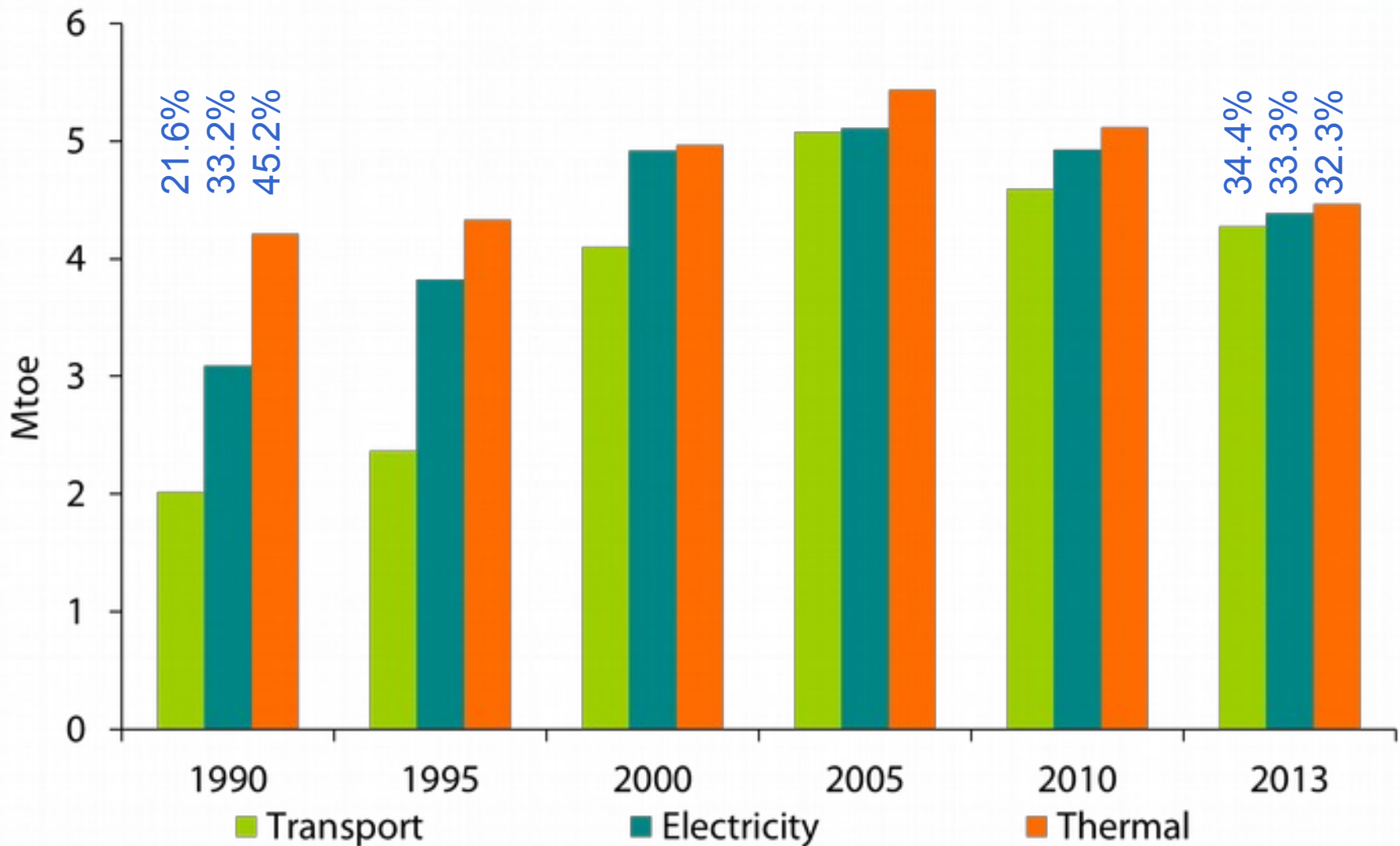
Heat & Renewable Energy Sources RES-H



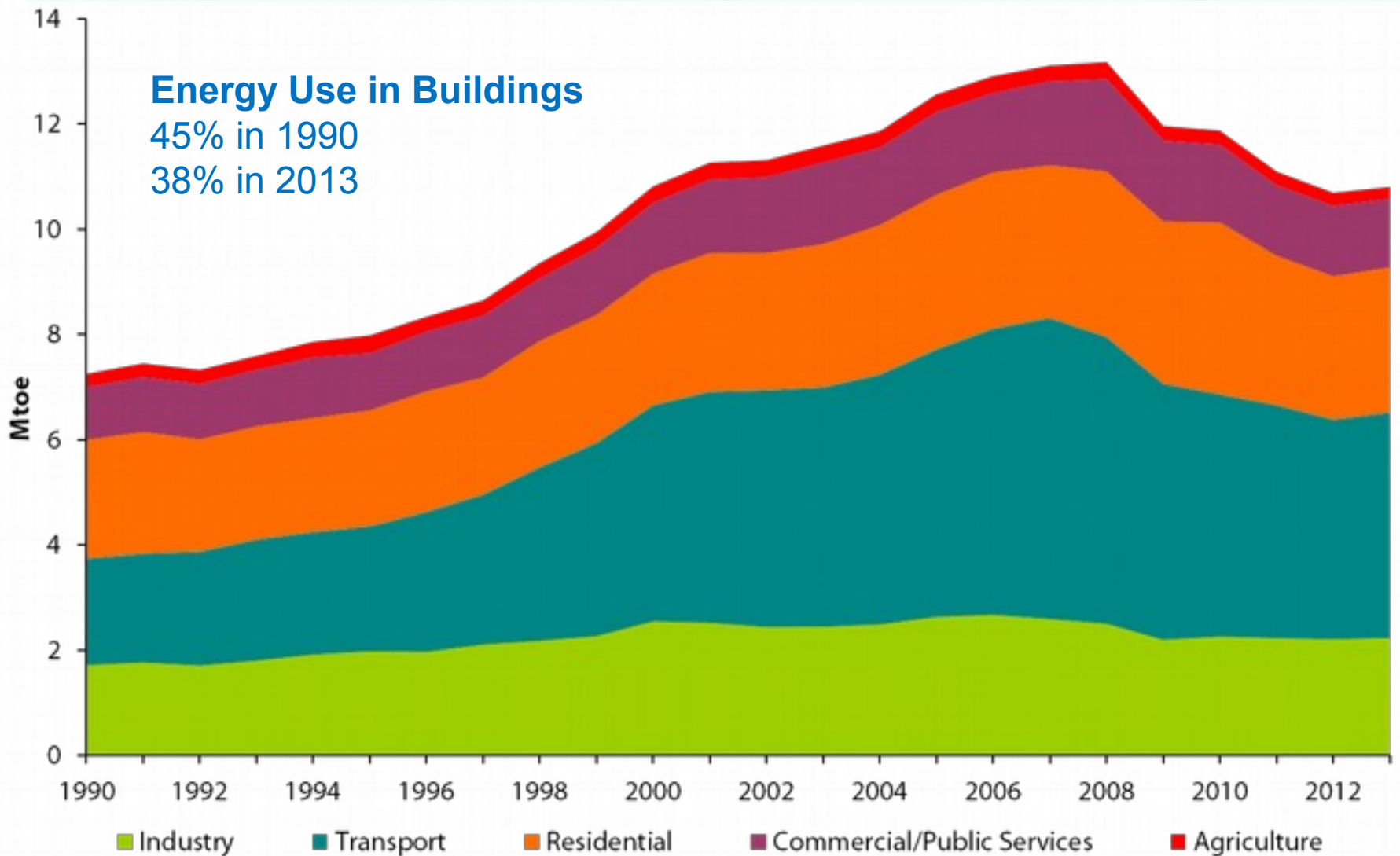
Import Dependency



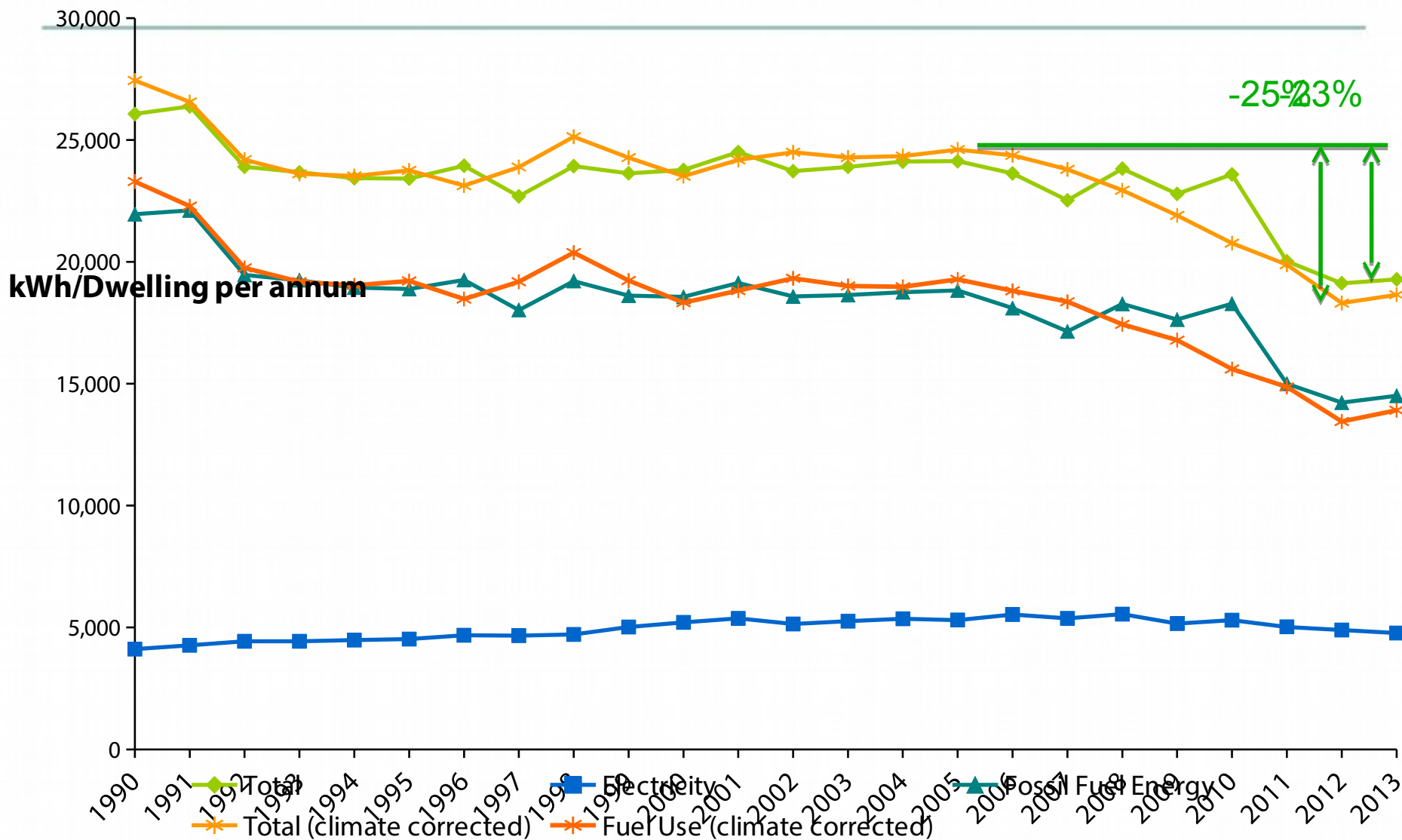
Energy Demand by Mode



Final Energy Use by Sector



Energy Consumption per Household



Policy Achievements

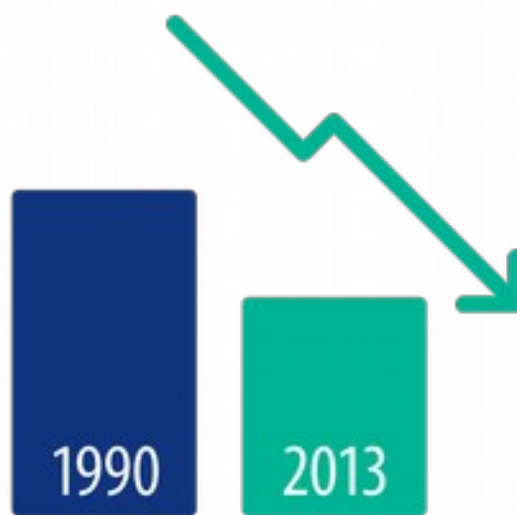
AVERAGE
HOME
FLOOR AREA

+50%



AVERAGE
ENERGY
CONSUMPTION

-32%



CO₂
11 tonnes

AVERAGE PER
HOUSE 1990

CO₂
6 tonnes

AVERAGE PER
HOUSE 2013

Progress towards renewable targets



50%

IRELAND IS ON AVERAGE
HALF WAY TOWARDS ITS
2020 RENEWABLES TARGETS



21%

ELECTRICITY

2020 TARGET

40%



5.7%

HEAT

2020 TARGET

12%



4.9%

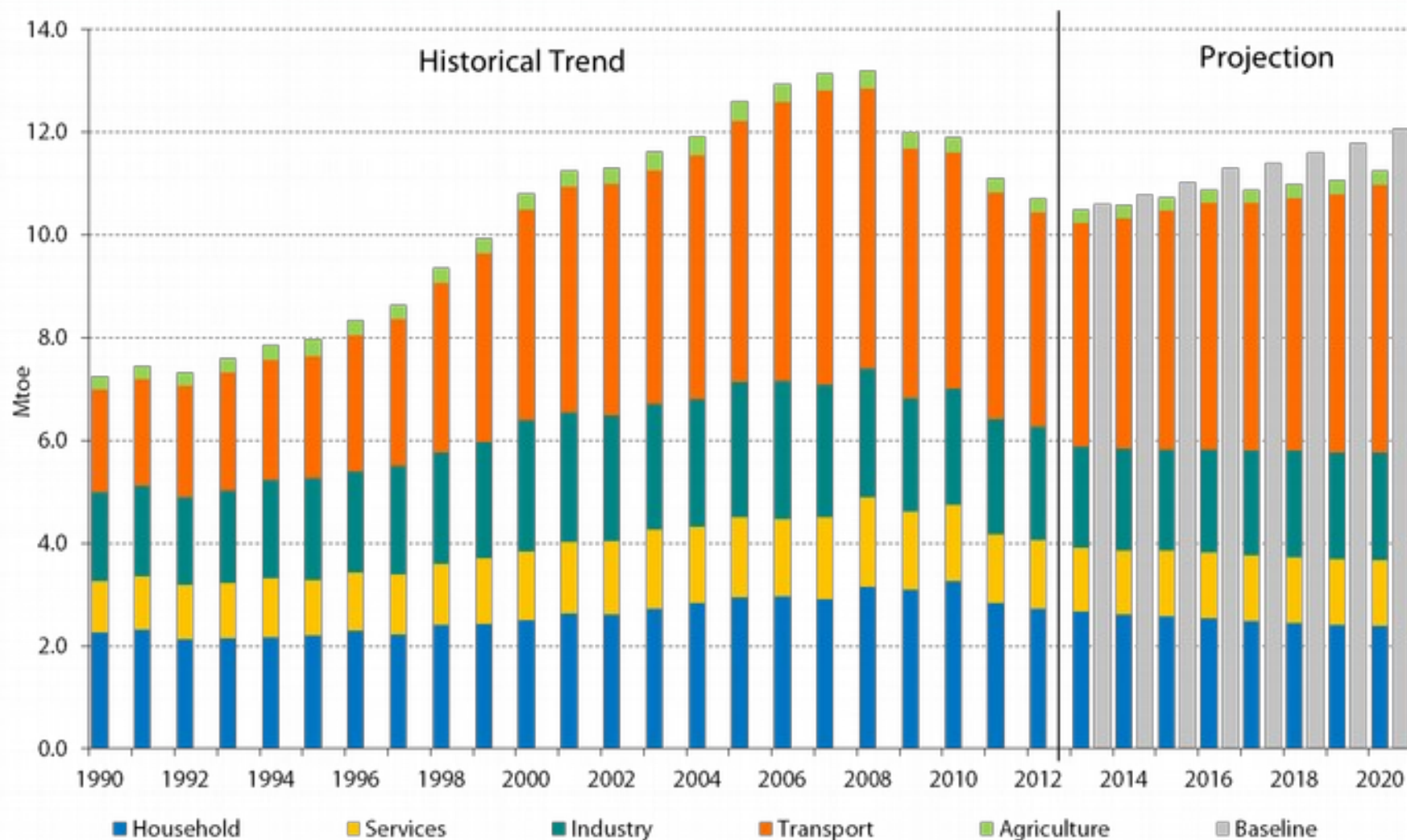
TRANSPORT

2020 TARGET

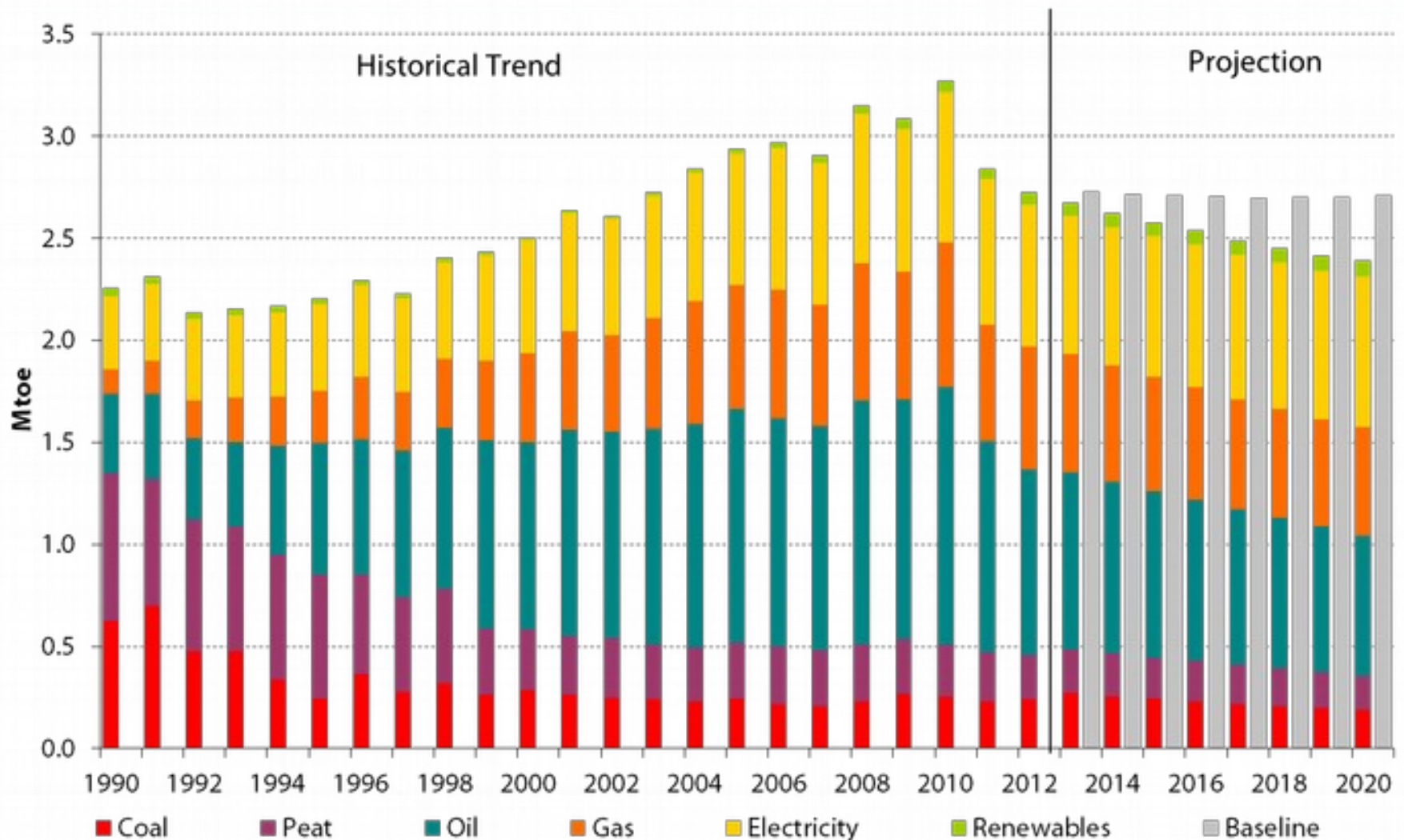
10%



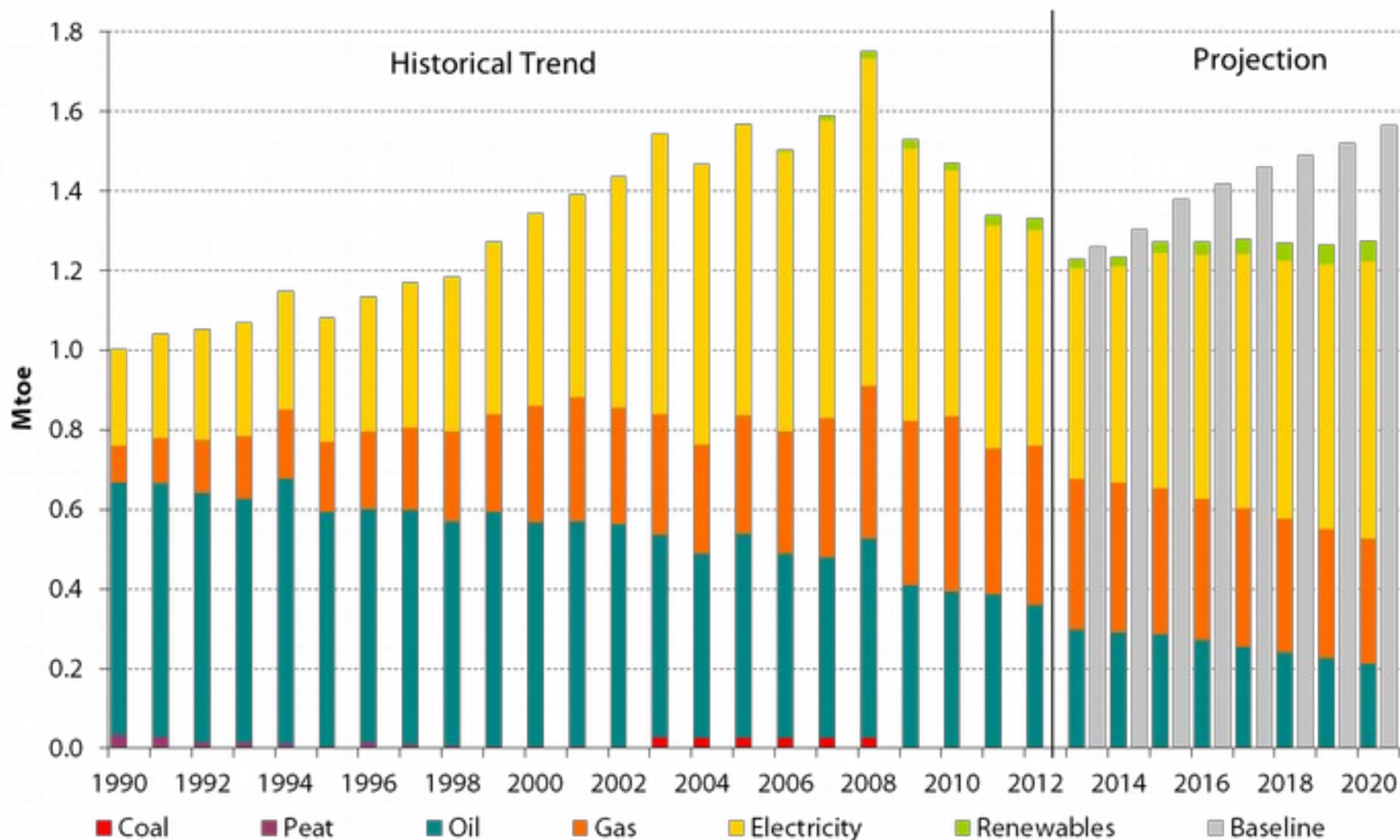
Projected overall energy use to 2020



Project household energy use to 2020



Project services energy use to 2020



Target interaction



Headline 2020 targets for Ireland

Energy Efficiency

20% energy savings
by 2020
(31,925 GWh)

Renewable Energy

Overall 16% RES of
national consumption.

Three sub-targets

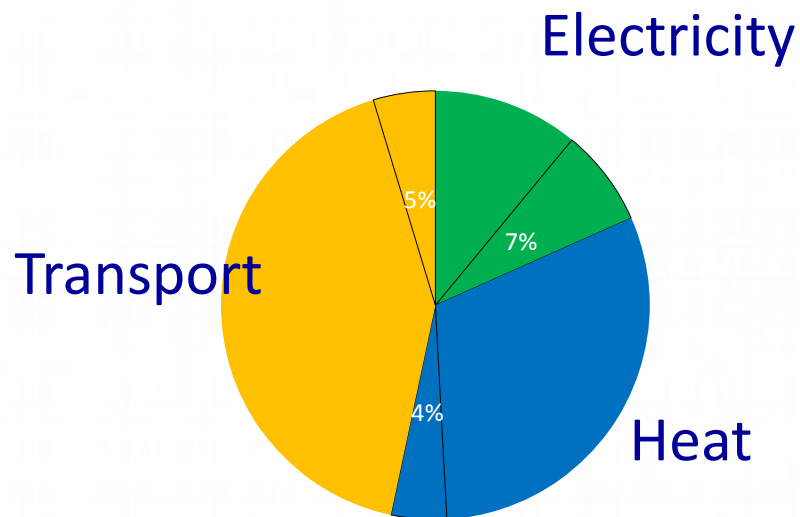
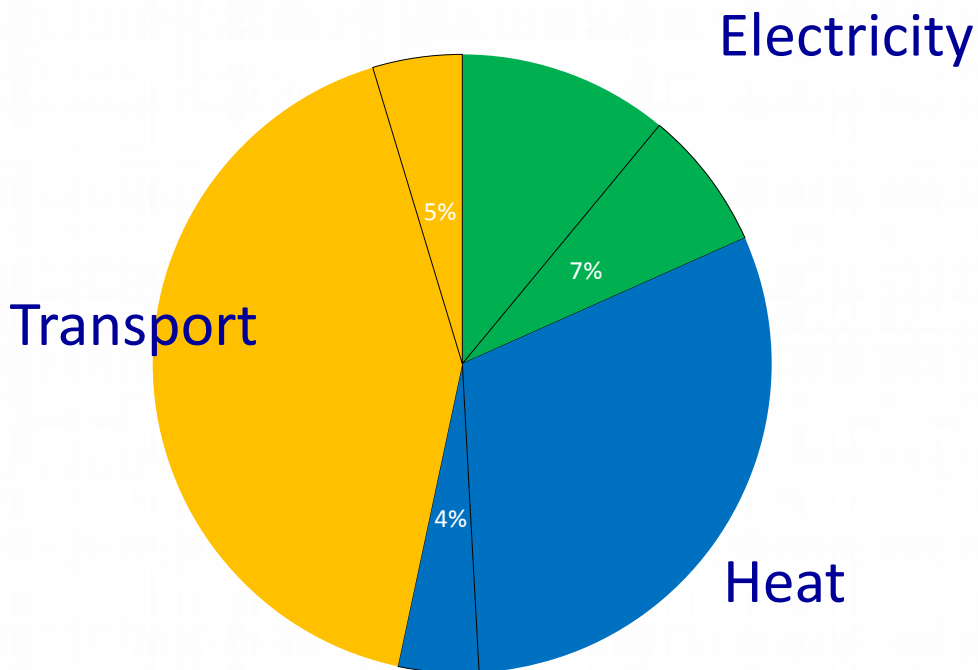
- RES-Electricity 40%
- RES-Heat 12%
- RES-Transport 10%

Emissions

EU Effort Sharing Decision (2013 – 2020)

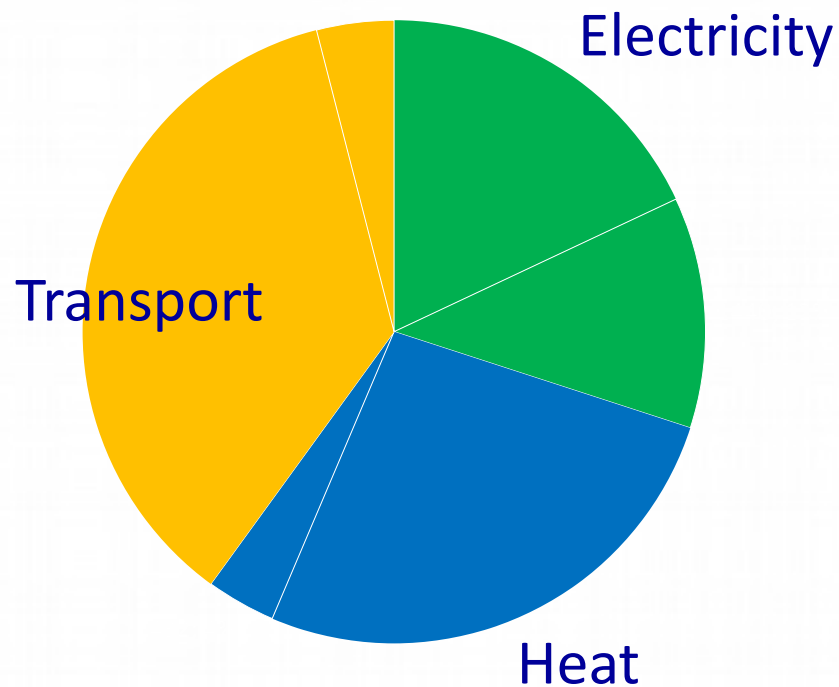
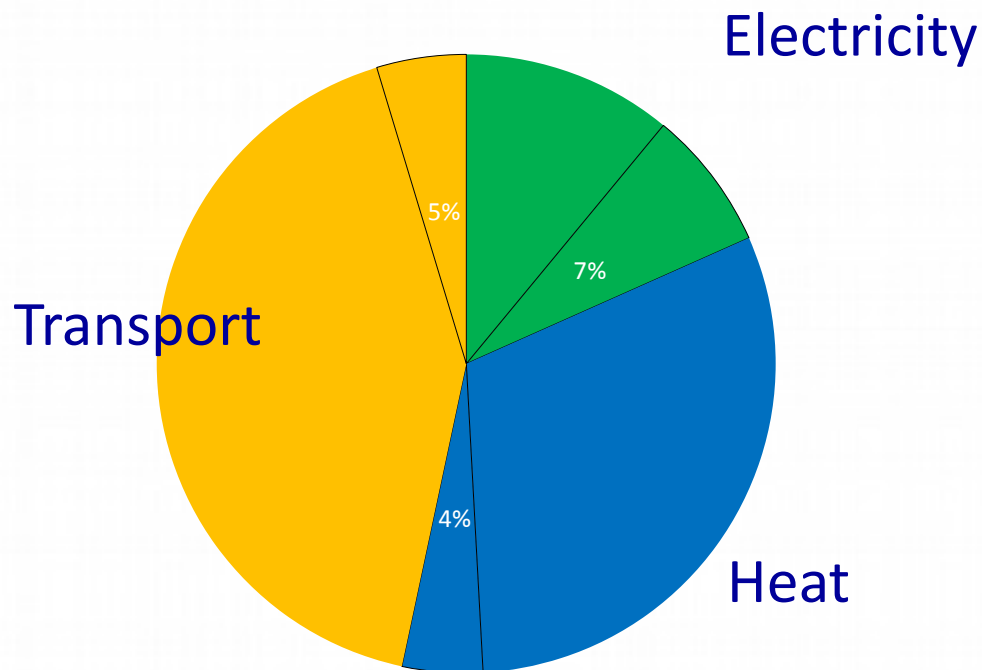
- 20% reduction non-ETS emissions relative to 2005
- Annual limits

Target interaction 1 – EE & RE



Efficiency gains make renewables targets easier ...

Target interaction 2 – Shift demand

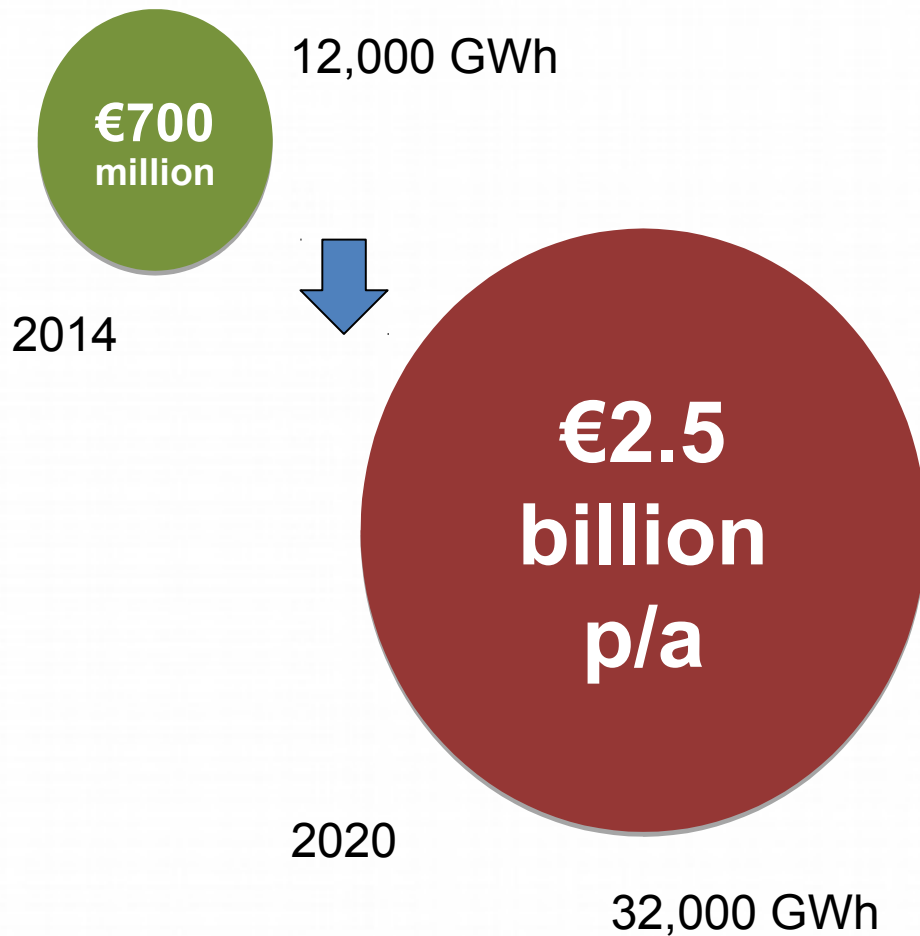


Demand shift places the burden on Emissions Trading sector

What's required to meet the targets?



Energy Efficiency



Success requires



50 – 100k home upgrades p.a.

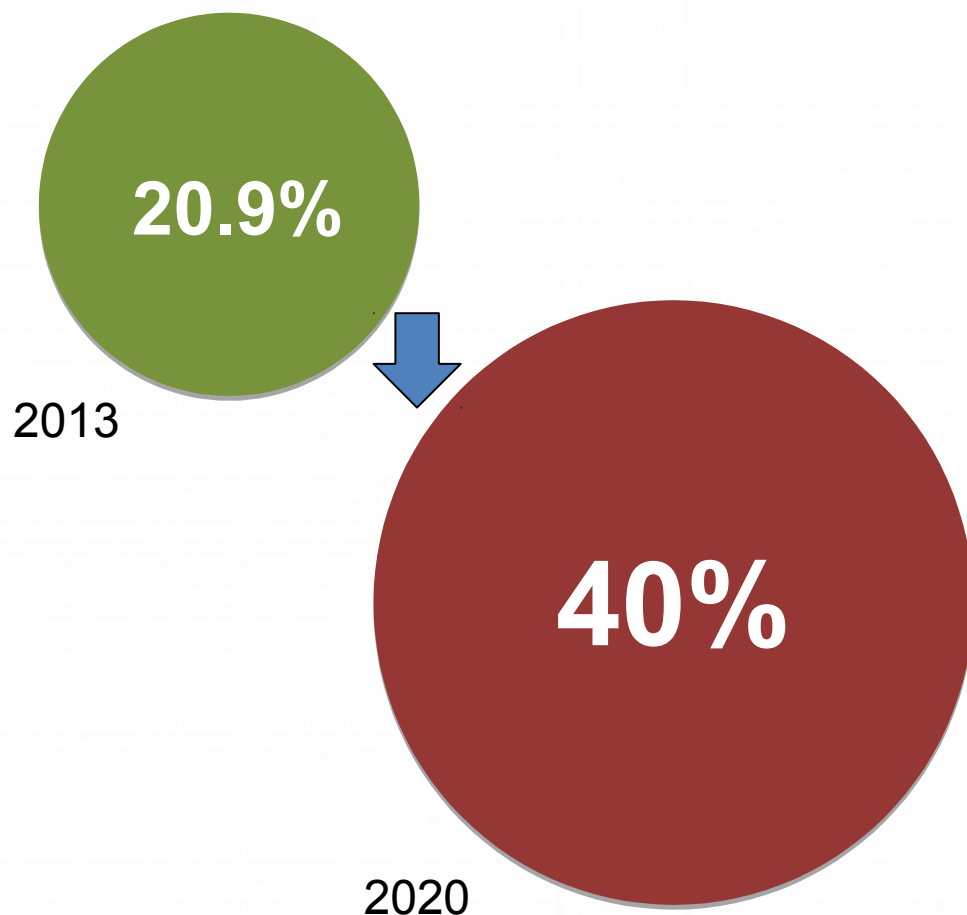


€1 bn investment per year



Business and public sector savings

Renewable Electricity



Success requires

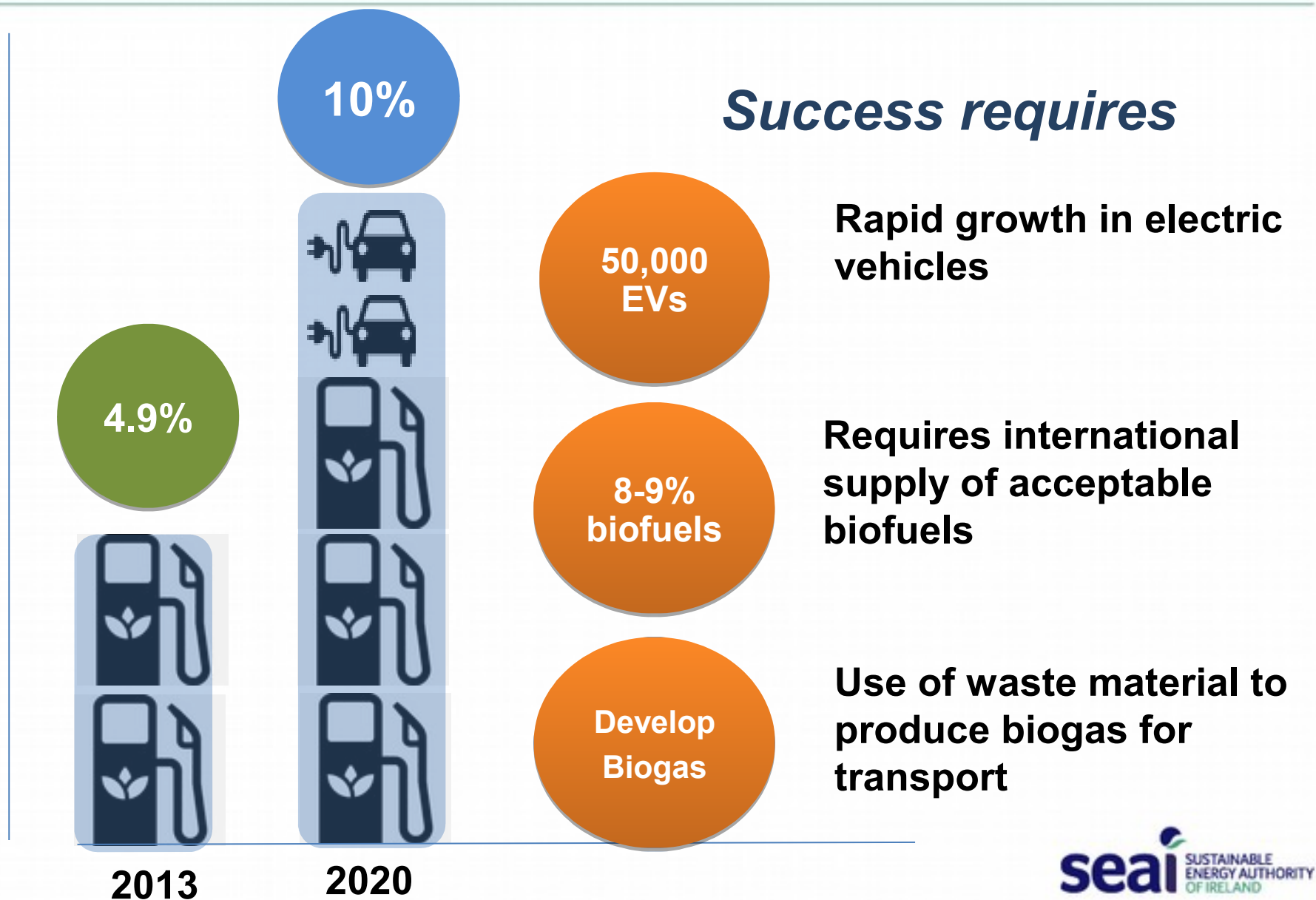


Deploy 250 MW per annum, up from 170

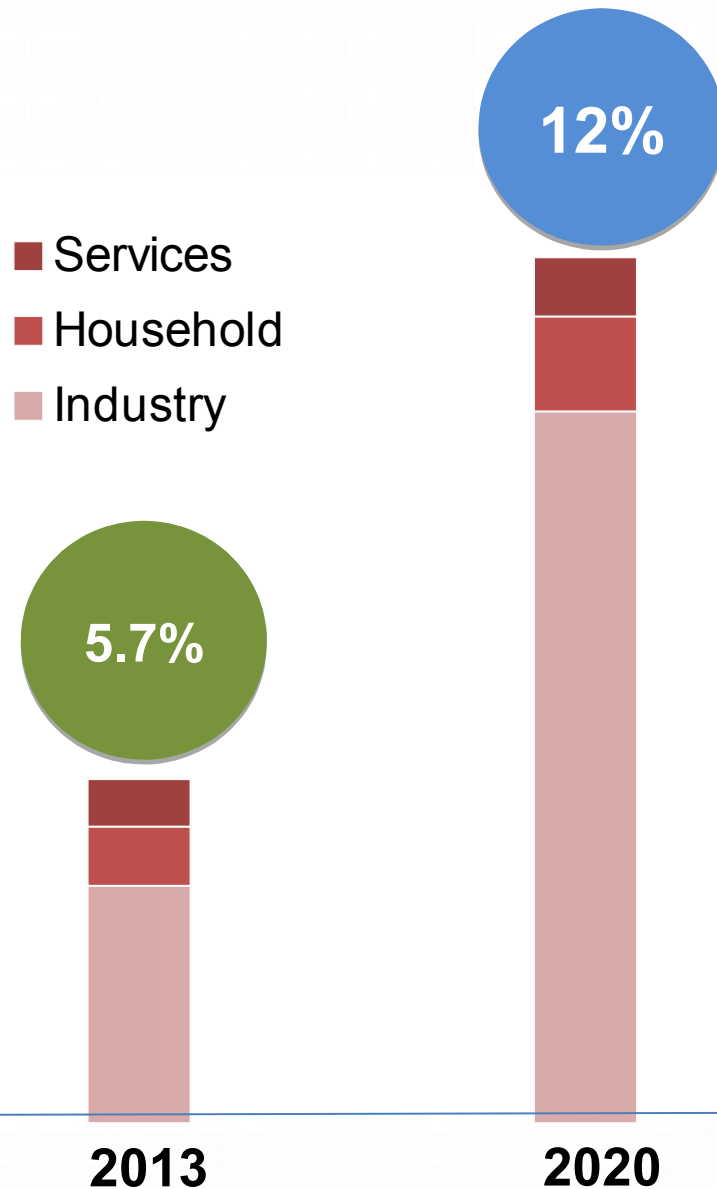


**Biomass CHP,
Waste to Energy,
Co-firing**

Renewable Transport



Renewable Heat



*Bioenergy recommends
RHI to deliver remainder
of target*

Equivalent of:



300,000 homes/3,000
SMEs/300 large industry

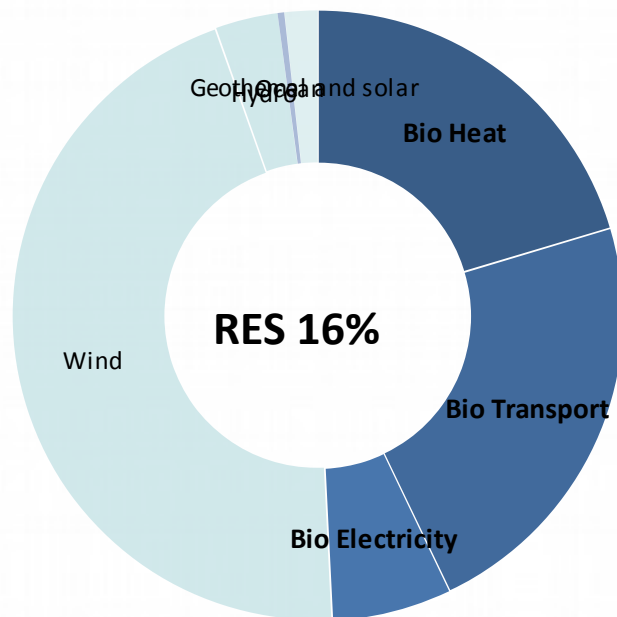
installing renewable heat
source



**Biomass in
Industry**

What energy sources are required to meet RES targets?

50% from bioenergy



- Wind, hydro and ocean in electricity
- EVs in transport
- Heat-pumps for heat

- Biofuels in transport
- AD and solid biomass in heat and electricity

Key Messages



Key Messages

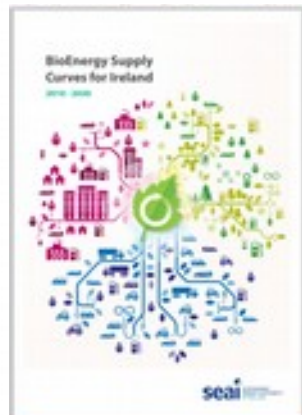
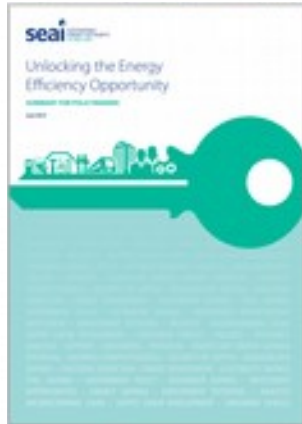
- Energy demand projections have been falling, in-line with forecasts of economic growth and policy action
- Level of effort to reach 2020 energy targets indicates an acceleration required
- Post 2020 – We have the tools to model a range of energy policy as it is set / considered

Forecast portal

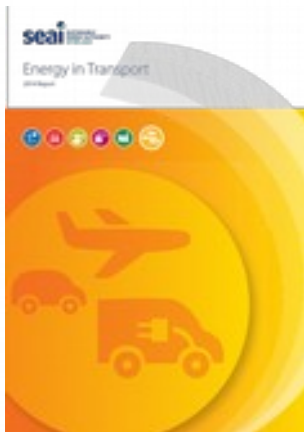
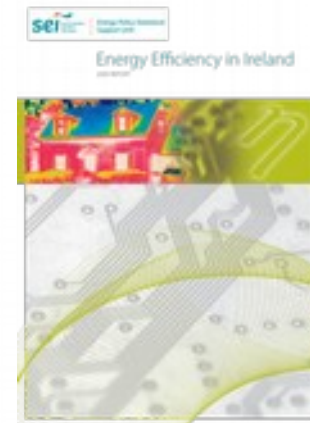


<http://forecasts.seai.ie/>

Publications Supporting Policy



Energy Statistics Publications



<http://www.seai.ie/Energy-Data-Portal/Energy%20Data%20Publications/>

Thank you



Ireland's EU Structural Funds
Programmes 2007 - 2013

Co-funded by the Irish Government
and the European Union

*The Sustainable Energy Authority of Ireland is financed
by Ireland's EU Structural Funds Programme co-funded
by the Irish Government and the European Union.*

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