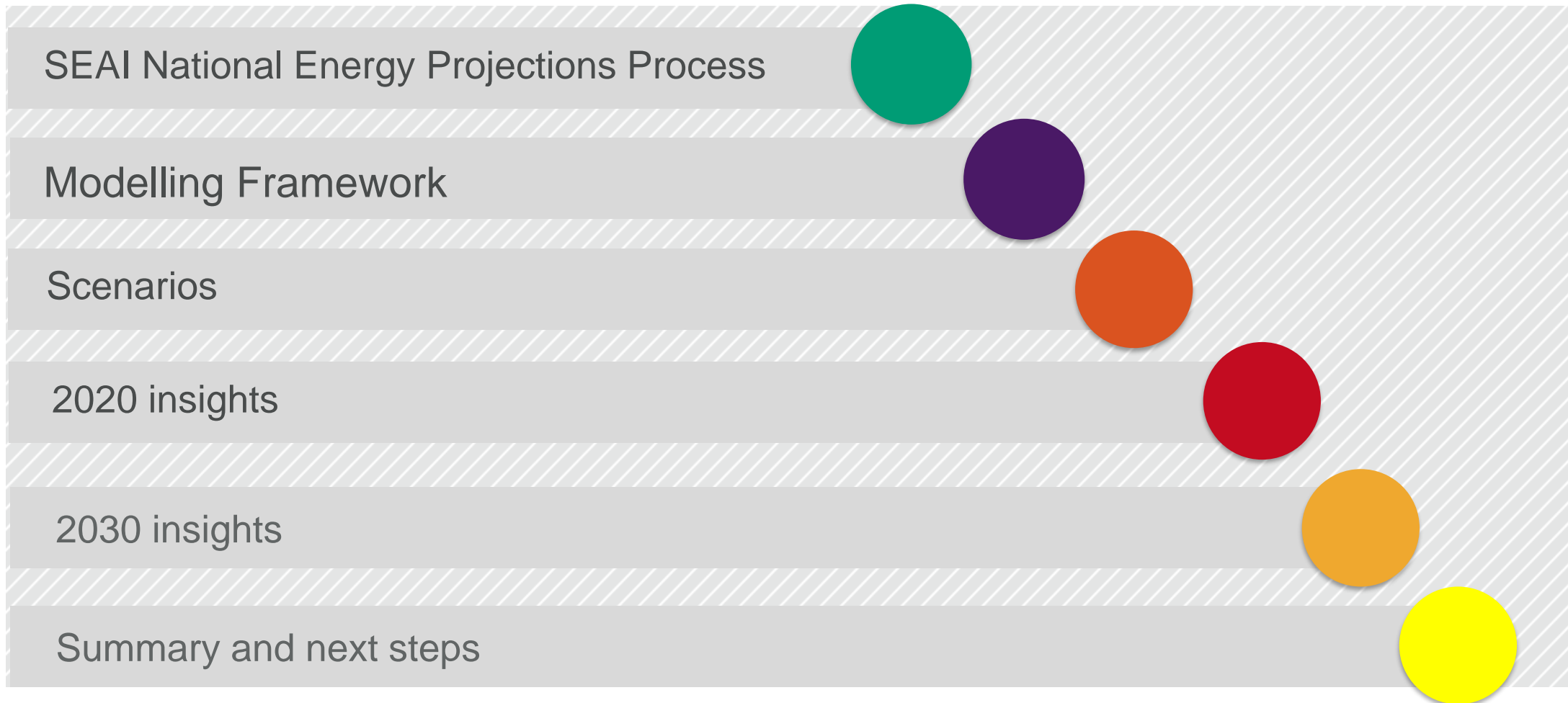




Energy Projections 2017 – 2030

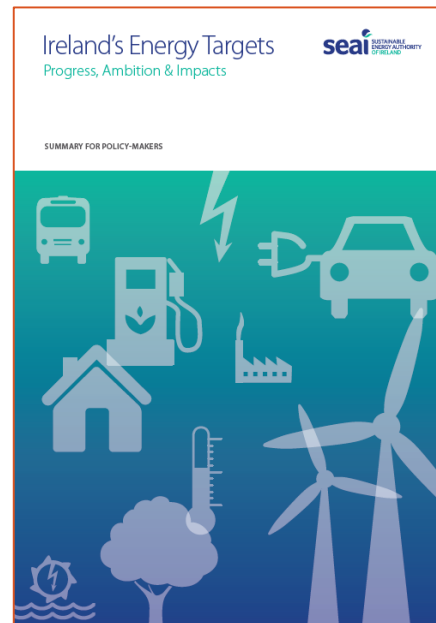
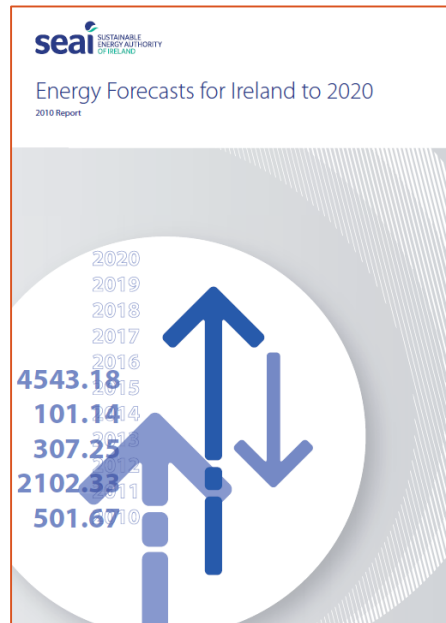


Overview

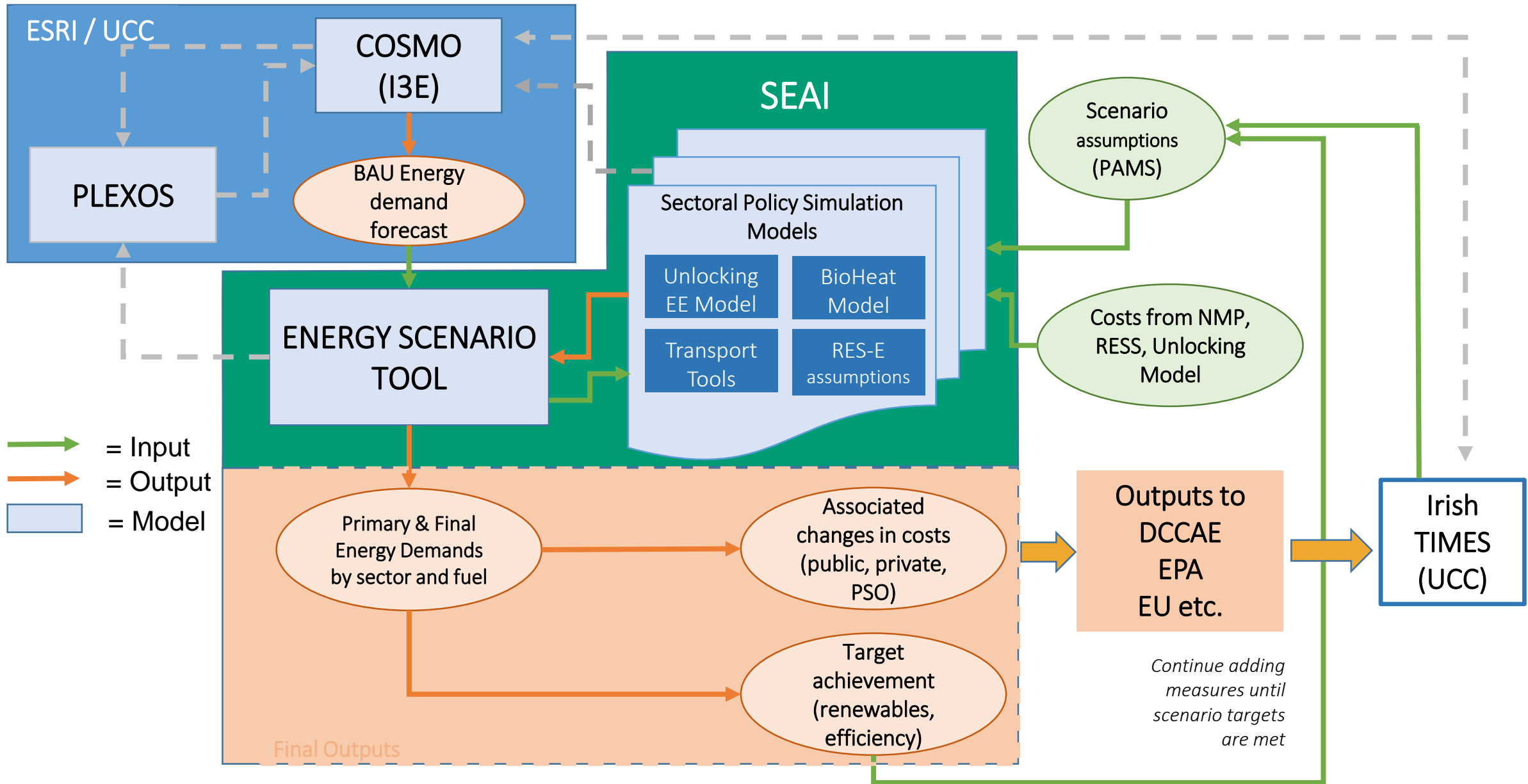


National Energy Projections - Background / Context

- Under the Sustainable Energy Act 2002 (Article 6 (2)(b)), SEAI has the legal function to compile and disseminate projections relating to energy production and use.
- Producing annual projections since 2006 in collaboration with the ESRI and stakeholders (DCCA, EPA, DPER, DTTAS, EirGrid, ESB, GNI, CRU, UCC, others)



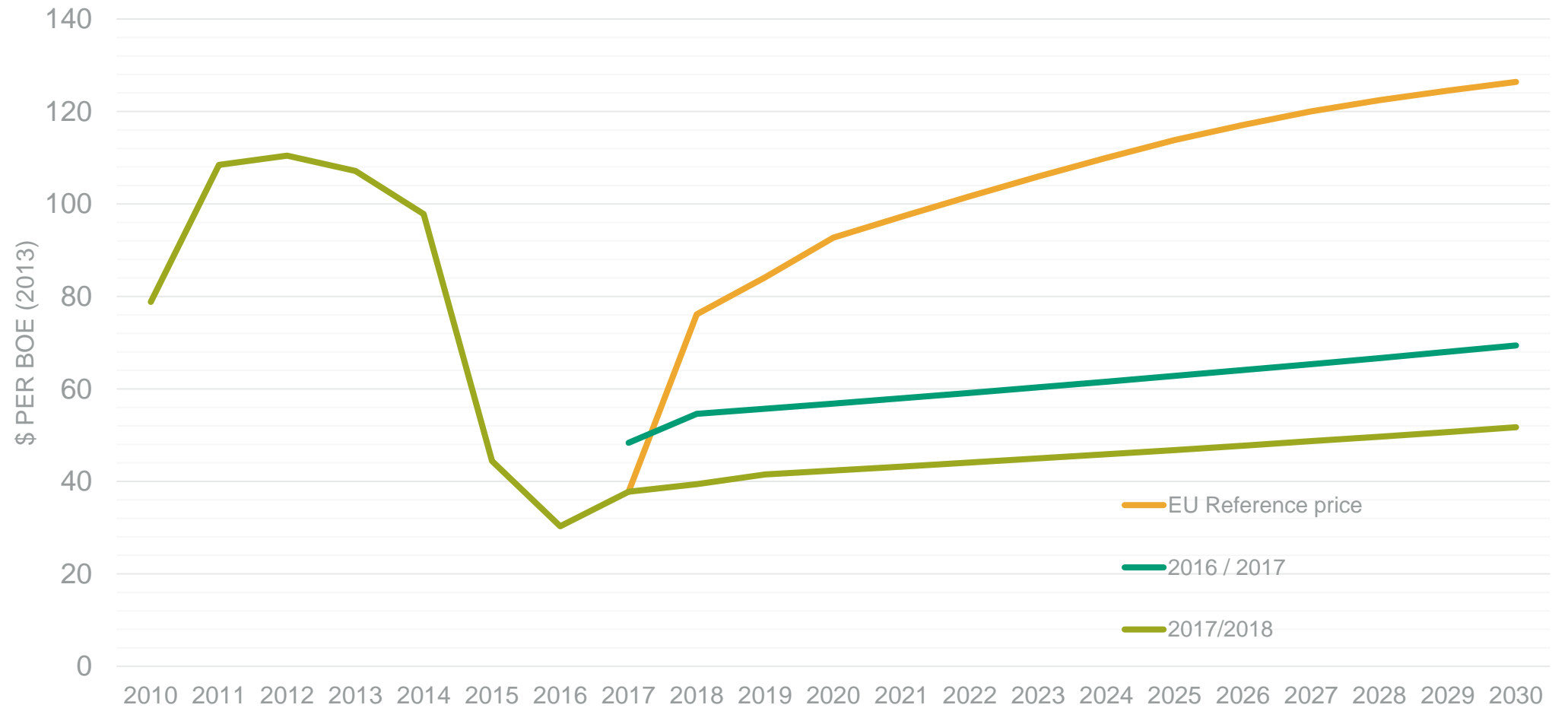
National Energy Modeling Framework (NEMF)



Fuel and carbon price assumptions

- Projections on the global economic environment
- Oil price based on simulations using the UK NiGEM model (National Institute Global Econometric Model)
 - Low oil price scenario
 - UK BEIS (formerly DECC) gas and coal prices
 - Sensitivity with EU Reference Scenario high oil price
- Carbon price based on EU Reference Scenario

Oil price comparison



COSMO Results : Average annual growth rate for key indicators

	2010-2015	2015-2020	2020-2025	2025-2030
GDP	2.00%	4.00%	3.5%	3.3%
Consumption	0.61%	8.18%	2.21%	1.07%
Employment	0.38%	3.08%	2.49%	1.36%
Industry Output	8.69%	3.97%	4.48%	4.31%
Market Services Output	5.87%	4.00%	2.73%	2.02%
Housing Completions	10,926	20,179	45,325	40,861

Scenario descriptions

- Baseline
 - continuation of Current Trajectory & PAMs announced before the end of 2016
 - corresponds to EPA WEM
- Advanced
 - with some more PAMs included in the 2017 and 2018 budget
 - corresponds to EPA WAM
- Price sensitivity with NDP+
 - Includes NDP measures
 - high oil price
- Adjusted shares
 - historical gross final consumption shares of electricity / heat / transport

Progress towards 2020 targets



Input assumptions

As we get closer to 2020 the continuing growth in the economy will make it difficult to meet 2020 renewable energy and energy efficiency targets

- The 2017 increase to the biofuels obligation scheme had a tangible impact in 2017, however another revision of the biofuels obligation scheme is required to meet renewable transport targets
- Support Scheme for Renewable Heat (SSRH) start date crucial for level of achievement of RES-H
- The anticipated strong growth in electricity demand and ongoing planning and project financing problems for renewable electricity sources may translate to a shortfall in the 2020 target

Scenario summary: Energy Targets

%	2017 (P)	Baseline (WEM)	Advanced (WAM)	High oil price	Shares adjusted
Energy efficiency	12.9	13.9	15.9	15.9	15.9
RES-E	30.1	37.2	37.7	38.5	
RES-H	6.8	7.5	7.4	11.2	
RES-T (Directive)	4.1 (7.1)	4.0 (7.3)	4.8 (9.2)	4.8 (9.2)	
RES	10.6	11.5	11.9	14.0	12.6

Focus on 2020

Result is influenced most significantly by:

- fuel price assumptions
- achievement on RES-H
- the extent to which biofuel blend rates can be increased before end-2020.
- Maximising RES-E can also influence, but to a lesser extent than heat and transport, given the relative shares of demand.
- Biomass co-firing with peat influences the availability of biomass for heat

Progress towards 2030 targets



Scenario summary: Energy Targets

	%	Advanced (WAM)	NDP+ Low oil price	NDP+ High oil price
Energy efficiency		22.1	24.7	24.7
RES-E		43.2	55	55
RES-H		8.8	20.3	26
RES-T (Directive)		6.1 (15.4)	10.0 (23.5)	10.3 (24.7)
RES		14.3	24.0	26.2

Focus on 2030

- Anticipated impacts of NDP included
- ***plus*** 55% RES-E, additional SSRH spend and a higher biofuel blend by 2030
- Significant impact on the estimated overall RES in 2030.
- **Between 24% and 26% by 2030**
- The high-end estimate is based on a price sensitivity, with higher (EU Reference Scenario) prices driving demand down and overall RES (percentage of demand) up.

Key messages

- Early effort key – especially for the cumulative emissions targets
- Prices are volatile and cannot be relied on to deliver favourable outcomes
- Further revisions of the biofuels obligation scheme are required to meet renewable transport targets
- Clear interaction between the use of biomass for co-firing in electricity generation and the availability of biofuels for heat
- Continuing effort to overcome non-market barriers for growth of renewable electricity and the growth of offshore wind energy
- Motivating and educating consumers both commercial and domestic are key to greater uptake of energy efficiency measures

Next steps

- Incorporating policy costs into the National Energy Modelling Framework
- Cost of compliance purchase is unknown as yet but should become clearer closer to 2020 which may permit estimating the liability
- Further improvement and refinement of sectoral simulation models
- Additional sensitivity analysis
- Difference policy permutations especially related to the NECP
- Collaborate with others to improve energy modelling in Ireland

Thank you for your attention

Questions or comments?

