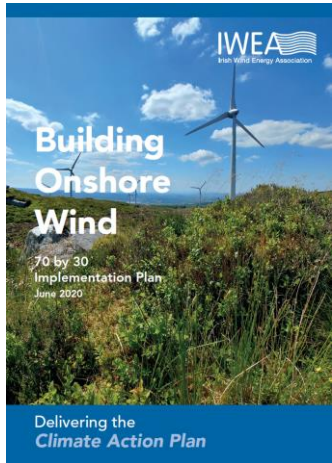

9. Route to Market via RESS/CPPAs

Building Onshore Wind:

Improvements 4-9 Required to Deliver 8.2 GW in Climate Action Plan

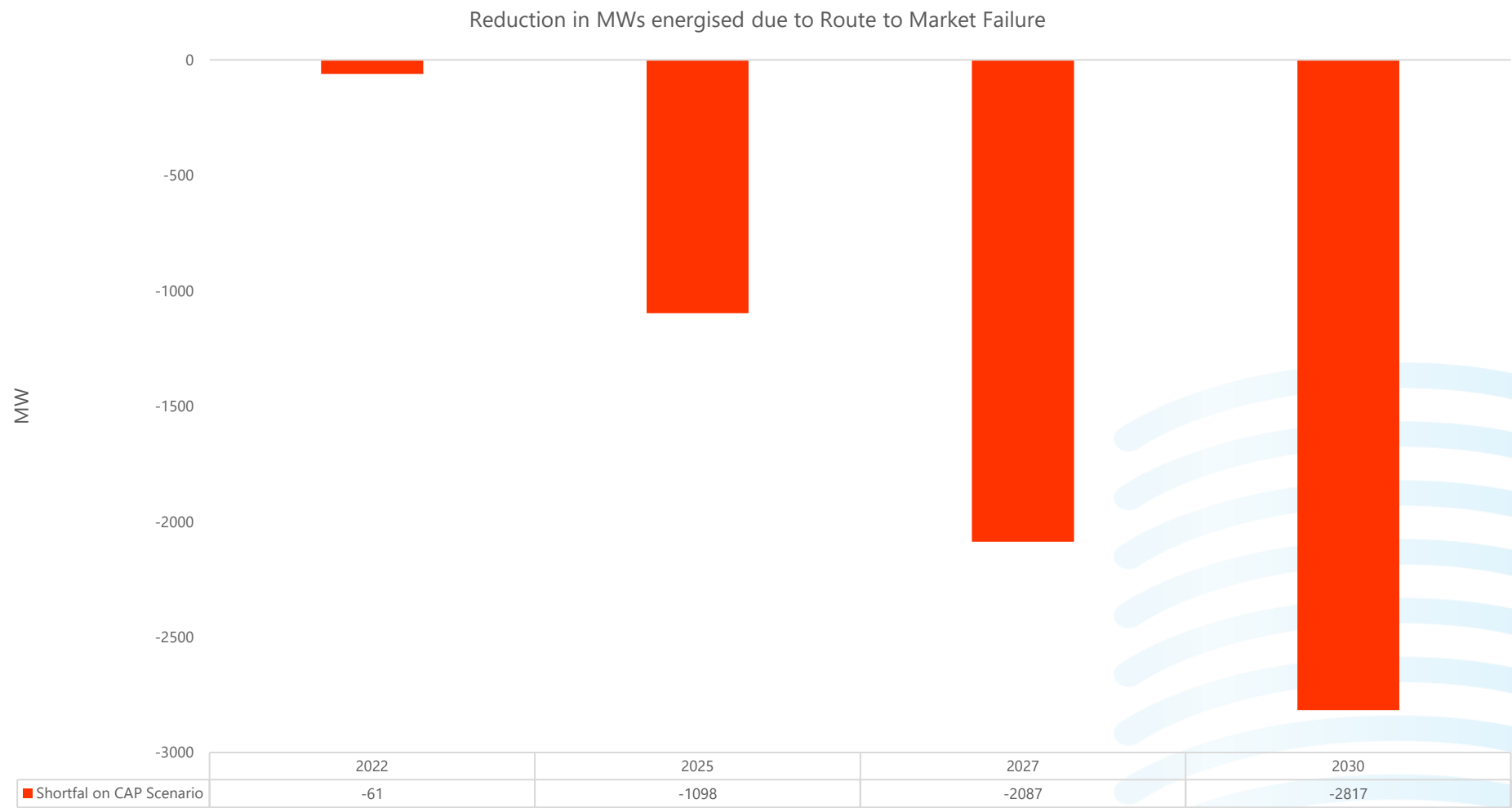


5. Transmission Grid Capacity	Parallel Transmission Development via PR5 and resourcing	<ul style="list-style-type: none"> - Increase from 27% to 70% proportion of projects which face no transmission system delay - Reduce from 48% to 20% proportion of projects which face a 2-year delay - Reduce from 24% to 10% proportion of projects which face a 4-year delay or longer 	EirGrid, ESBN	CRU, ABP	EirGrid to design and consent the appropriate network reinforcement and ESBN to carry out necessary construction and energisation works. CRU to determine the allowed spend on network reinforcement projects.	2020	-1750MW -11.5% RES-E +2344kt CO2
6. Grid Consenting	a) Parallel Grid Consenting via PR5; b) resourcing and early engagement with SOs on connection methods via a new Project Development Support and Tracking office.	Increase parallel grid consenting from 30% of projects to 80% and obtain early engagement with SOs.	a)DHPLG, DTTAS, CRU; b)EirGrid, ESBN	a)EirGrid, ESBN; b)CRU	a) DHPLG to update the Planning and Development Regulations. DTTAS to make necessary amendments to the Roads Act; b) SOs to create a new Project Development Support and Tracking Office.	2020	-77MW -0.5% RES-E +103kt CO2
7. Grid Offer Longstop Dates	ECP Long-Stop enables entry to three RESS auctions via grid offer regulations or RESS entry requirements or a Grid Following Funding (GFF) model.	Grid offers allow projects to enter three annual RESS auctions rather than one.	CRU	DCCAE	CRU to design and decide on ECP framework.	2020	-832MW -5.5% RES-E +1114kt CO2
8. Grid Delivery	Strict Grid Delivery Timelines via PR5 and penalties for late delivery.	Reduce finance and build period from 2.5 years to 1.5 years.	ESBN, EirGrid	CRU	ESBN and EirGrid, as parties to the Infrastructure Agreement, to develop connection design specifications and grid delivery programmes.	2020	-253MW -1.7% RES-E +338kt CO2
9. Route to Market via RESS/CPPAs	Annual route to market for 66% of projects via a) RESS or b) Corporate PPAs (CPPAs)	BaU case assumed 66% of projects found route to market each year. Impact quantified by removing this and assuming onshore wind is excluded beyond RESS-1 and CPPA market is limited to 100 MW per year.	DCCAE, SEAI, DoF, DPER	DHPLG, CRU, EirGrid, ESBN, Large Energy Users, IDA, ESRI	RESS: First auction to be completed in July 2020 with annual auctions for onshore wind to follow thereafter. Update RESS timeline and volumes to reflect this. CPPAs: New policy to pass some of the savings due to CPPAs to corporates who sign CPPAs. Both: Task force to be set up with a focus on reducing the cost of renewable electricity in Ireland.	2020	-2817MW -18.5% RES-E +3774kt CO2

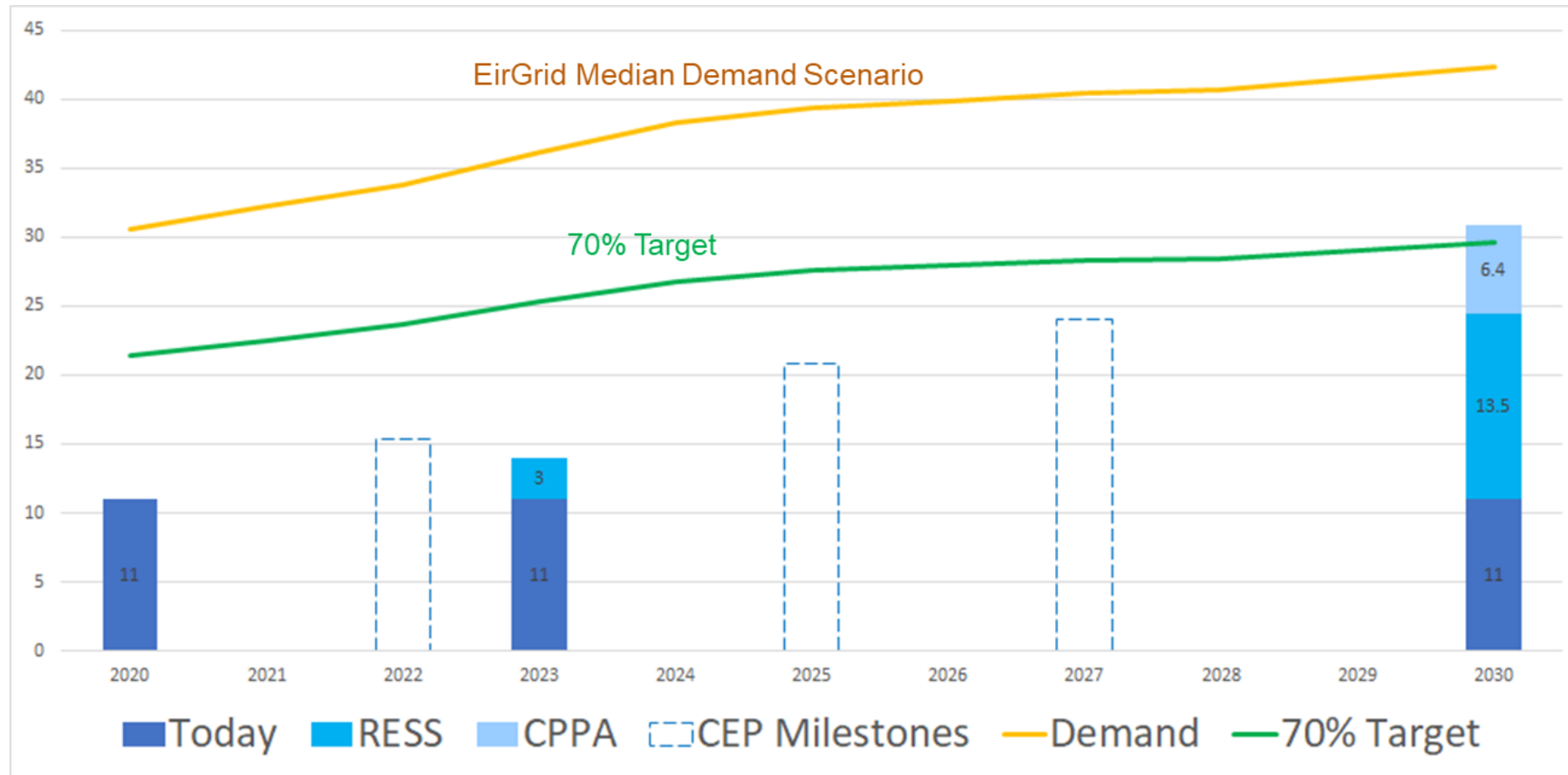
Modelling Assumptions

- Assessed differently to other scenarios
- BAU assumption that 66% of the onshore wind projects which have planning and a grid offer will find a route to market each year
- Based on assumed competition ratio of 1.5 in auctions meaning 66% of projects are successful and can proceed to financial close and construction
- Then assessed the impact if there wasn't this opportunity for 66% of projects to take up a route to market on an annual basis i.e. no further annual RESS auctions for onshore or a viable CPPA market
- Based on two concerns
 1. Uncertainty around future onshore RESS auction timelines
 2. Feasibility of the volumes possible under the CPPA market

Impacts of Route to Market Failure



Importance of Onshore Wind to Interim Targets



Uncertainty regarding RESS Timelines

2019 - 10,000 MWh renewables

RESS High-Level Design 2018

	MWh	Auction Year	Delivery
RESS 1	1,000 to 3,000	2019	2020
RESS 2	3,000	2020	2022
RESS 3	3,000	2021	2025
RESS 4	4,000	2023	2027
RESS 5 (Possible)	2,500	2025	2030

Climate Action Plan 2019

	MWh	Auction Year	Delivery
RESS 1	1,000 to 3,000	2020	2023
RESS 2	?	2021	?
RESS 3	?	2022	?
RESS 4	?	2024	?
RESS 5 (Possible)	?	?	?

2030 - 23,500 MWh renewables

Recommendations for RESS

- Clarity on RESS timelines and technology participation are vital
- DECC should publish a new RESS auction timeline which promotes annual RESS auctions that are sized according to the volume of renewable generation available to participate in them each year.
- Indicative auction quantities could be set using pipeline surveys for onshore, offshore and solar generation which are compiled by relevant industry bodies
- Potential to look at technology specific auctions
- Support needed by CRU/EirGrid to conduct auction processes

CPPAs Context

- Climate Action Plan has a target of 15% of electricity being supplied by CPPAs in 2030, which equates to approximately 2,000-2,500 MW of onshore wind
- The primary consideration for the corporate is expected to be the price the corporate must pay for its electricity but there also considerations in terms of
 - Hedging against future price increases
 - Meeting Corporate Social Responsibilities
- Wider benefits
 - CPPAs contributing to our CAP targets
 - Consumer benefits –less RESS support needed and lower wholesale prices
 - Attractiveness for Foreign Direct Investment (FDI)



Barriers to CPPAs in Ireland

- Commercial Barriers
 - Irish renewables competing in global markets where renewable generation in other countries is often cheaper, for instance PPAs in some Scandinavian countries secured for as low as €30 MWh.
 - Wholesale prices also likely to fall as renewable generation grows
- Regulatory Barriers
 - The use of private wire generation for large industrial users is prevalent in many other countries such as Germany. In Ireland there are regulatory barriers preventing the use of private wire generation

Climate Action Plan Timelines

Action 29: Ensure that 15% of electricity demand is met by renewable sources contracted under Corporate PPAs			
Steps Necessary for Delivery	Timeline by Quarter	Lead	Other Key Stakeholders
Initial scoping work on Corporate PPAs including identification of barriers and policy options	Q2 2019	SEAI	CPPA Advisory Group, DCCAE, CRU
Consultation workshop(s) with industry and relevant government or state agencies (CRU, DFin, Revenue, IDA etc.)	Q3 2019	SEAI	DCCAE, CRU
Complete consultancy report on Renewable Electricity Corporate PPAs including set of policy recommendations	Q4 2019	SEAI	CPPA Advisory Group, DCCAE
Follow-up workshop with relevant entities (CRU, EirGrid, revenue etc.) to discuss and analyse in detail the proposed recommendation(s)	Q2 2020	DCCAE	SEAI, CRU
CPPAs Policy Paper based on consultancy study and Advisory Group Recommendations Paper	Q3 2020	DCCAE (with input from relevant Government Departments and Agencies)	
Implementation of approved recommendation(s)	Q4 2020	DCCAE	CRU, SEAI, Other relevant State Entities

- Without changes to commercial and regulatory structures in Ireland, Corporate PPAs are unlikely to deliver at significant scale in the short term
- Unclear where SEAI/DECC work sits at the moment. No clarity for industry on CPPAs policy paper or recommendations
- Changes must be progressed asap to facilitate the development of the market

Barriers to CPPAs in Ireland

- Resolving the Commercial Barriers
 - Reduce the cost of developing renewable electricity in Ireland
 - IWEA developing paper specifically on CPPAs but some potential options:
 - Government guarantees or backstop prices to de-risk CPPAs from low commodity prices
 - Government-supported credit insurance for corporate offtakers
 - PSO Levy exemptions
 - Increase carbon prices in the electricity sector e.g. carbon floor price
- Resolving Regulatory Barriers
 - The CRU to provide clarity on the use of Private Wires in Ireland
 - Make it a condition of planning permission or a grid connection offer that a Large Energy User with a demand in excess of 5 MW must procure a CPPA with a renewable electricity generator in Ireland.



Thank You

