

Mobilising Bioenergy with Policy and Action



February 2019

Bioenergy Project Commencement

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DWF Dublin
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- Bioenergy can and should play a greater part in Ireland's electricity sector
- Key Project Commencement Steps

DWF Introduction

Who we are

We are a global legal business, transforming legal services through our people for our clients.

Like us, our clients recognise that the world is changing fast and the old rules no longer apply. That's why we're always finding agile ways to tackle new challenges together.

DWF Dublin (2007) and Belfast (2016) are vibrant full service offices.

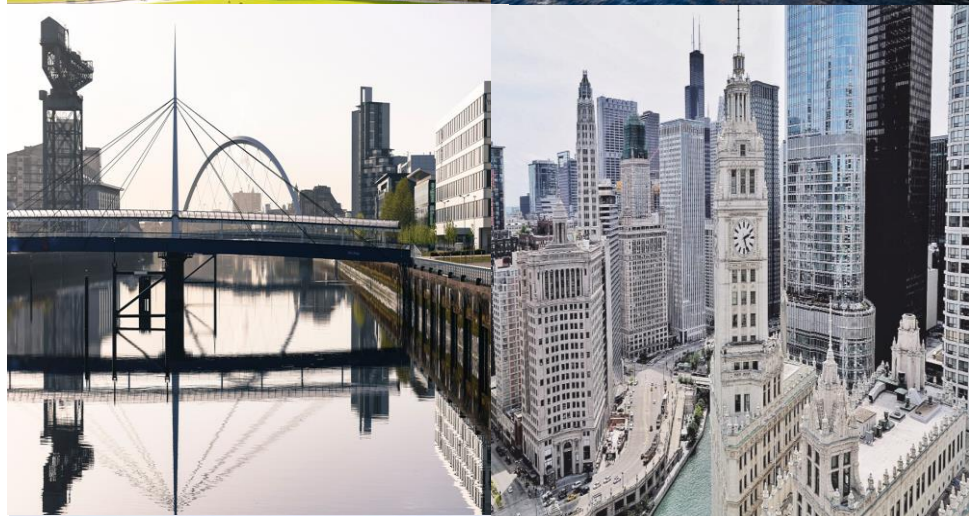
- We are undergoing significant and planned growth.
- DWF Dublin growth 3 partners in 2015 to 9 in 2019.
- Recent infrastructure / energy deals:
 - Solar
 - Wind
 - Anaerobic Digestion / Gas to grid
 - Biofuture Plant in NE England



Where we are

There are over 2,700 people across the DWF Group, based in 26 key locations.

Our international links are varied and vast, allowing us to support clients in several jurisdictions through our relationships with other leading legal partners.



Belfast	Berlin	Birmingham
Brisbane	Bristol	Brussels
Chicago	Cologne	Dubai
Dublin	Edinburgh	Glasgow
Leeds	Liverpool	London
Manchester	Melbourne	Milan
Milton Keynes	Munich	Newcastle
Paris	Singapore	Sydney
Toronto		

Sectors



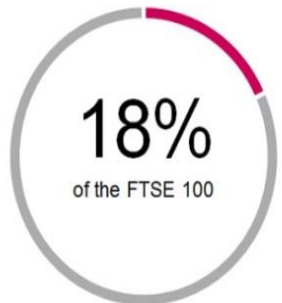
- We go to market through the sectors our clients operate in, so we can identify and anticipate challenges and find solutions to the legal problems they face; provide support for smarter decisions, reduce risks, and give greater clarity and flexibility.
- Our core sector groups include Energy, Financial Services, Corporate, Insurance, Public Sector, Real Estate, Retail, Food & Hospitality, Technology and Transport.

Our performance

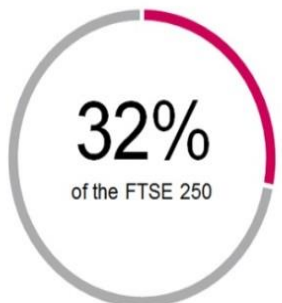
What our Clients Say

We are ranked by both Chambers and Partners and Legal 500, with comments from our clients including:

“The DWF team continues to impress with the strength of its renewables offering. The solicitors are excellent specialists who are very methodical and commercially aware, and who have handled a number of complex matters”



We work for 18% of the FTSE 100



We work for 32% of the FTSE 250



Electricity Sector

The All-Island Electricity Market

- All Island Generation Capacity Statement 2017 -2026.
- Integrated Single Electricity Market (ISEM).
- National Development Plan 2018 (Project 2040)
 - Population increase of 1M+
 - Focus on non-Dublin growth
 - Decarbonised economy
 - Electricity heat and transport
 - RESS to support new 4,500MW green electricity
- Datacentres
 - Gamechanger
 - GHG Protocol
- Renewable Energy Support Scheme (under consultation)
 - Auctions
 - Technology neutral
 - Overtaken by NDP
 - Competing renewables

Bioenergy in the Fuel Mix

Bioenergy in the Irish (Renewables) fuel mix

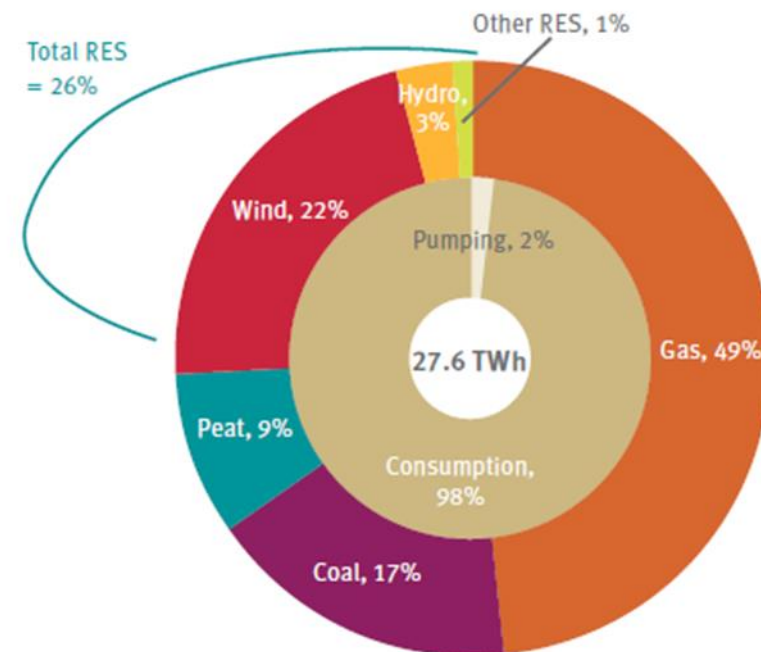
Most renewable sources play second fiddle to onshore wind in Ireland.

at year end:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
All Wind	2740	3080	3420	3760	4100	4240	4380	4520	4660	4800	5000
All Hydro	238	238	238	238	238	238	238	238	238	238	238
Biomass/LFG (including Biomass CHP)	54	54	64	84	114	114	114	114	114	114	114
Waste (Assume 50% renewable)	9	40	40	40	40	40	40	40	40	40	40
Edenderry on Biomass	35	35	35	35	35	35	35	35	35	35	35
Solar PV	15	20	25	50	70	80	90	100	100	100	100
Total RES	3091	3467	3822	4207	4597	4747	4897	5047	5187	5327	5527

EirGrid Group – All Renewable energy sources in Ireland

Bioenergy in the Irish (Renewables) fuel mix

- Biogas / AD has performed well in Northern Ireland.
- Irish biogas has unique revenue streams / robustness.
- Confluence of demand, demographics and technology.
- Irish biogas sector needs to step into the power sector.
- Green Gas certification will help solve the identity crisis.

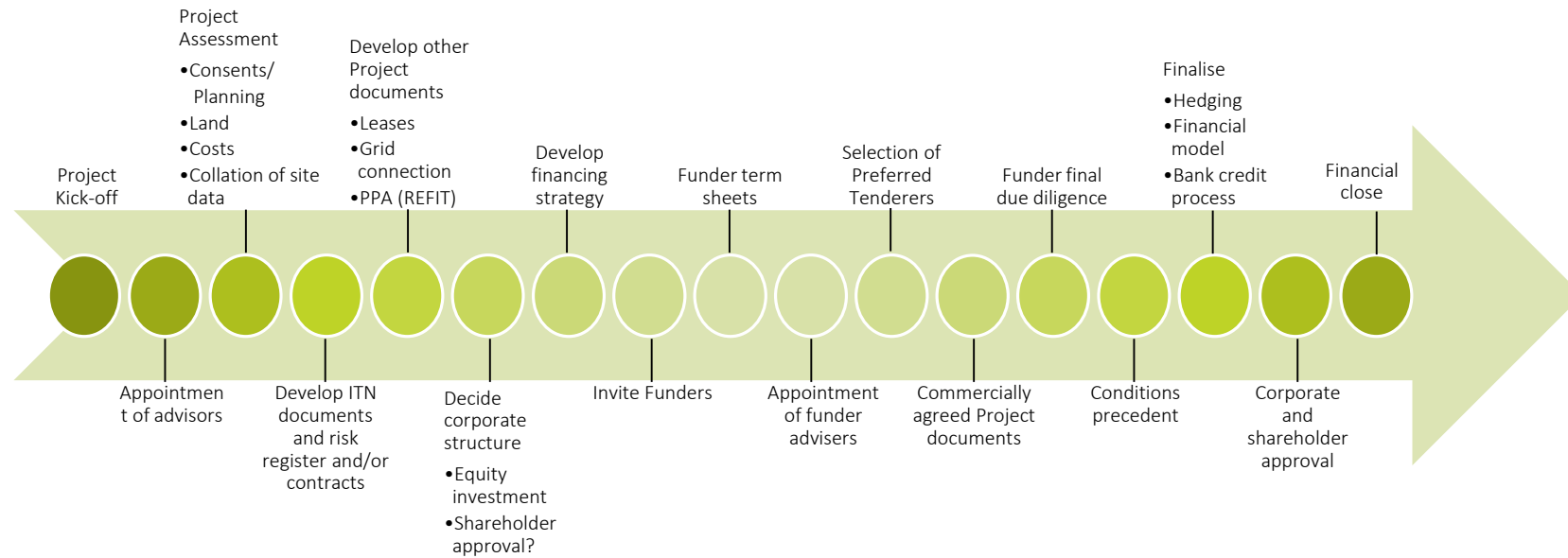


EirGrid Group – Fuel mix in Ireland in 2016

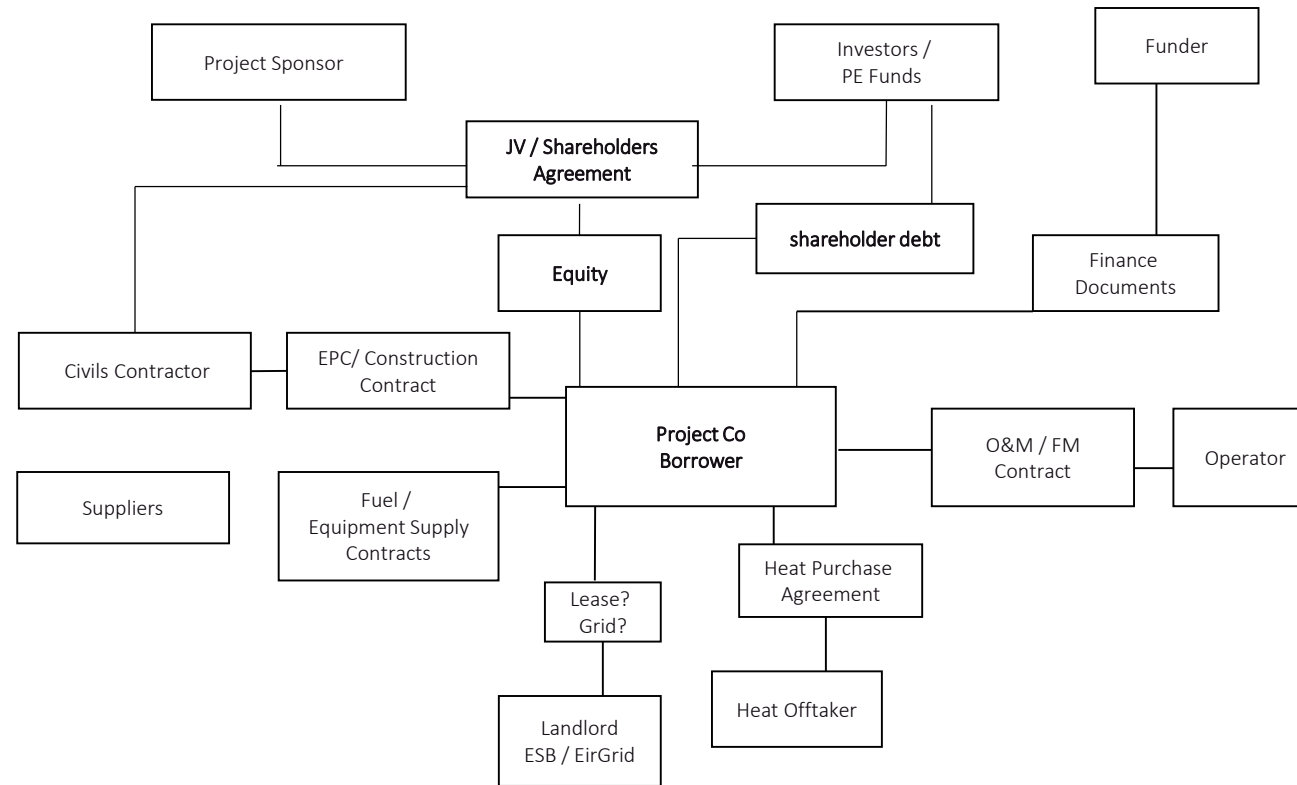
Developing biogas at scale

- Dedicated (biogas) CHP plants need to be built
 - Private wire projects will emerge?
 - Locate the generation near / at demand
- Construction needs to feature true EPC/ Turnkey wraps
 - Non EPC structures are costly and difficult
 - Is the domestic construction sector able to respond?
- Level of requisite Government support?
 - “Support” is not the same as “underwriting” risk
 - Feedstock and offtake certainty / pump prime?
 - Regulatory stability
 - Strong, robust and consistent planning
 - Support Green Gas Certification / GHG Protocol

Project Finance Lifecycle



Sample Contract Structure



Pointers on Fuel Supply Agreements

- Sustainability of Fuel Choice
- Panel of Suppliers and storage capacity
- Contractual Remedies for Serious Breaches
- Source of compensation
- Currency hedging

Pointers on Construction of the Plant

- Technology choice
- EPC versus EDCM
- Interfaces and civils
- Forecast O & M contracts

Bioenergy / Bankability

Ticking the box....risk analysis is common to all renewables.

Feedstock Availability



Construction



Offtake



O+M



Technology



Government Support



Diverse Revenues



Regulatory / permitting



Availability of equity



Availability of debt



Compete in RESS?



Quality Lawyers!?



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Thank You



Beyond borders, sectors and expectations

DWF is a global legal business, connecting expert services with innovative thinkers across diverse sectors. Like us, our clients recognise that the world is changing fast and the old rules no longer apply.

That's why we're always finding agile ways to tackle new challenges together. But we don't simply claim to be different. We prove it through every detail of our work, across every level. We go beyond conventions and expectations.

Join us on the journey.

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