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Unlocking the Value and Bankability of Battery Storage in Ireland: Contractual Innovations

Battery storage will rapidly transform Ireland's transition to a low-carbon electricity system. As renewables like wind and solar increase their share of generation, the need for flexible storage assets grows ever more urgent. The business case for utility-scale batteries in Ireland remains in a formative stage, with evolving policy, market, and grid conditions shaping the sector's trajectory.

This article examines some of the key contractual mechanisms, such as tolls and floor agreements, that can underpin the development and financing of large-scale battery projects, providing greater revenue certainty and unlocking access to competitive capital for sponsors and investors.

The Growing Imperative for Utility-Scale Battery Storage

The integration of utility-scale batteries is fundamental for the stable, secure, and decarbonised functioning of Ireland's grid. With the increased variability inherent to renewable generation, batteries not only absorb surplus energy during periods of low demand or high renewable output, but also release it when the grid most needs support. This flexibility smooths electricity prices, upgrades grid resilience, and underpins ambitions for energy independence and Net Zero targets.

In addition, dispatch down of renewables will only rise without adequate storage. Batteries also deliver key ancillary services such as frequency response and can defer or avoid costly grid infrastructure upgrades. The Irish Government's Climate Action Plan and Energy Storage Framework clearly signal battery storage will be essential in the national decarbonisation toolkit.

Evolving Policy and Regulatory Environments

Ireland is taking encouraging steps to create an investable environment for utility-scale batteries. For example, EirGrid is implementing major reforms through its Scheduling and Dispatch Programme ("**SDP**") to enable more effective dispatch of battery storage on the Irish grid. These changes will fully integrate batteries into all market timeframes, allowing them to both absorb and release energy based on system needs, and reflect their unique capability to act as both load and generator. Under these new measures (which we anticipate coming into effect later this year), batteries will be able to directly submit and adjust their charge/discharge schedules, enhancing operational flexibility, while the grid operator will use real-time state-of-charge data to optimise scheduling and system balancing. Collectively, these SDP upgrades will remove some of the previous market and operational barriers for batteries, improving grid resilience and incentivising expanded battery deployment across Ireland.

Connection policy reforms have also progressed on hybrid grid connections, enabling projects that combine batteries with renewables to access the grid under clearer and more flexible frameworks.

More recently, EirGrid announced that battery charging will be included in the calculation of System Non-Synchronous Penetration (SNSP). Reflecting battery charging in the SNSP calculation may compliment trading of the battery units in the electricity markets.

Crucially, regulatory innovation is extending to the commercial models supporting utility-scale batteries, building on learnings from more advanced markets, most notably the adoption of tolling agreements and revenue floors.

Revenue Models: Tolling and Floors

As the sector matures, battery revenue strategies have evolved. Two common offtake strategies are tolls and floors:

- **Toll Agreements:** The battery owner receives a contracted fixed payment (the "**toll**") in return for granting an offtaker exclusive rights to optimise/dispatch the battery. This removes merchant risk for the asset owner, transferring it to the counterparty.

- **Revenue Floors:** Asset owners are guaranteed a minimum income (the "**floor**"), with profit-sharing mechanisms for upside if revenues exceed the floor level. This structure provides both downside protection and a route to share in market upside.

While fully merchant models leave financiers exposed to volatility, tolls and floors are increasingly preferred as they unlock less costly, higher-leverage funding by improving revenue certainty. Tolling contracts offer the highest revenue security, transferring market risk to the offtaker and generally supporting leverage up to 70% or more, but require lengthy, complex negotiations and strong offtaker credit.

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Key Legal Considerations: Tolls and Floors

Several key legal factors must be addressed to ensure that toll and floor agreements for battery projects are robust and bankable:

- **Revenue Certainty and Adjustments:** Parties must define precisely how payments (toll or floor) are calculated and under what scenarios they are adjusted, for example, if the battery's actual availability or efficiency deviates due to degradation or outages. Clear definitions and periodic true-ups are critical.

- **Risk of New Revenue Streams:** The allocation of future, unforeseen revenue streams (such as new ancillary services) must be addressed. Typically, if new revenues are realised without extra asset costs or degradation, these accrue to the offtaker with the toll; if extra wear is involved, some risk/reward may be rebalanced between the parties.

- **Hybrid/co-located projects:** Where batteries are paired with renewables, this presents additional complexity in grid and risk allocations, and require careful drafting to delineate performance accountability and revenue impacts of curtailments or operational issues.

- **Performance and Availability Guarantees**: Contracts need detailed provisions for liquidated damages ("**LDs**") or reductions in payment if the asset fails to meet contracted availability/service levels. LDs are often set so that the asset owner can recover similar amounts from its supply chain (original equipment manufacturer or balance-of-plant contractor), but careful back-to-back structuring is essential.

- **Asset degradation:** Degradation must be controlled through over cycling limitations and clear adjustment mechanisms, preserving value for both lenders and asset owners post-contract.

- **Grid Connection and Third-Party Risks:** If the asset's output is restricted due to grid operator actions or curtailment, contracts must clarify who bears this risk, especially since the connection provider does not compensate for lost opportunity. Lenders will require risk-sharing and mitigation strategies to support predictable cashflow.

- **Force Majeure and Change in Law:** Clauses must cover extraordinary events and regulatory changes, such as modifications to the electricity market that impact return assumptions or make prior models obsolete. "Change in law" can trigger renegotiation of price or terms, but exclusions for foreseeable changes should be considered.

- **Counterparty Creditworthiness**: Bankability ultimately depends on the credit strength of the toll or floor provider. Lenders and investors will expect high-quality (sometimes investment-grade) counterparties, and may require parental guarantees or other credit enhancements.

Who Are the Buyers?

In our experience, the entities most likely to transact on toll or floor agreements include:

- **Large energy traders and traders with market access:** They are seeking to integrate flexibility for portfolio hedging.

- **Utility offtakers:** Diversifying their portfolios and managing integrated generation and supply risk.

- **Corporate buyers:** Though nascent, some corporates are exploring tolls/floors for 24/7 renewables supply strategies.

Conclusion

The deployment of utility-scale batteries will transform the Irish electricity system—but success depends as much on innovative legal contracting as on hardware and infrastructure. Toll and floor structures are at the frontier of battery revenue models, and thoughtful legal design is key to unlocking the finance required for the development of these projects.

Please contact a member of our Energy Group if you would like to learn more.

PHILIPLEE

Contact Our Energy Group

Niall Donnelly
PARTNER
Energy Projects & Regulation

+353 (0) 1 237 3700
ndonnelly@philiplee.ie
Niall Donnelly

Alice Whittaker
PARTNER
Planning & Environment

+353 (0) 1 237 3700
awhittaker@philiplee.ie
Alice Whittaker

Alison Hardiman
CONSULTANT
Planning & Environment

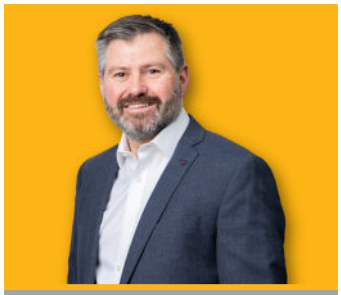
+353 (0) 1 237 3700
ahardiman@philiplee.ie
Alison Hardiman

Eoghan Doyle
PARTNER
Corporate M&A

+353 (0) 1 237 3700
edoyle@philiplee.ie
Eoghan Doyle

Simon O'Neill
PARTNER
Project Finance

+353 (0) 1 237 3700
soneill@philiplee.ie
Simon O'Neill



John O'Donoghue
PARTNER
Property

+353 (0) 1 237 3700
jodonogue@philiplee.ie
John O'Donoghue

Angelyn Rowan
PARTNER
Construction

+353 (0) 1 237 3700
arowan@philiplee.ie
Angelyn Rowan

Kerri Crossen
PARTNER
Construction

+353 (0) 1 237 3700
kcrossen@philiplee.ie
Kerri Crossen

Max Bail
ASSOCIATE
Energy Projects & Regulation

+353 (0) 1 237 3700
mbail@philiplee.ie
Max Bail