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## Going their separate ways

### NEXT STEPS FOR EUROPE'S ENERGY SECTOR

*In the conclusions of its Energy Sector Review, the European Commission (EC) has proposed further unbundling of monopoly transmission networks from competitive activities, such as retail supply and power generation. One way would be to separate ownership of transmission networks from their day-to-day operation. As the experiences of a number of Member States show, achieving effective separation is not easy. This bulletin explores some of the reasons why.*

The energy market value chain comprises both activities (such as the ownership and operation of pipes and wires) that are typically natural monopolies and for which the efficient outcome is for there to be just one operator, and those (such as power generation and retailing) that are potentially competitive. It has long been accepted by regulators and companies alike that some separation between competitive and natural monopoly activities is required to secure a functioning market for the competitive activities – that is, a level playing-field for third parties. Without separation, integrated operators may be able to use their



monopoly in transmission to favour their competitive operations. For example, the transmission network operator:

- frequently determines the mix of power stations used to meet demand, so that third parties may find that their generation does not run in favourable price periods;
- may play a key role in planning network expansion, so that it could delay grid reinforcements that lead to increased competition for generation; and
- typically requires access to commercially sensitive information – including, say, on customers considering switching retailer – so that third parties may find that their quotes to customers are being undercut by the integrated operator.

The current European rules governing the energy market require accounting, legal and managerial separation. The EC does not believe that these requirements go far enough. It says that there is no guarantee of non-discriminatory access to information; there remain incentives for discrimination in terms of third-party access; and there could be a bias in network investment decisions if these decisions have an impact on (integrated) generation or retail businesses.

The EC has suggested two alternative approaches to further market reform.

- **Ownership unbundling.** Integrated entities would be required to divest their natural monopoly network activities.
- **The creation of Independent System Operators (ISOs).** The assets involved in the network activities would remain under the ownership of the integrated entity, but they would be operated (on a day-to-day basis) by a wholly independent party (the ISO).

From a regulator's perspective, the first option might be thought to be more straightforward to implement. However, the companies may argue that it is a disproportionate response to the EC's concerns. The second option may therefore be more appropriate, but, from a regulator's perspective, there is more involved in the design and implementation. The remainder of this bulletin describes the challenges involved.

#### NO MODEL ANSWER

There is currently little agreement on how to go about the task. While ISOs have been introduced in several energy markets (Ireland, Italy, Switzerland, Scotland, Australia, and some US states), each model differs slightly.

The debate has been further complicated by suggestions from the energy industry of a third possibility – a Regional System Operator (RSO) model. In this model, one ISO may serve several national transmission systems. Its proponents argue that this would facilitate European market integration and speed up the creation of an effective internal market for energy.

However, both economic theory and experience from other markets indicate that, if related activities are to be split between separately-owned entities, decisions as to the scope of activities undertaken by each entity, and the

incentives put in place for them, will be critical. Getting these design features wrong could result in inefficiencies and higher costs to consumers. So, whatever the model chosen (and the debate is likely to rage for some time), the EC will need to make sure the results are better, not worse, than the current ones.

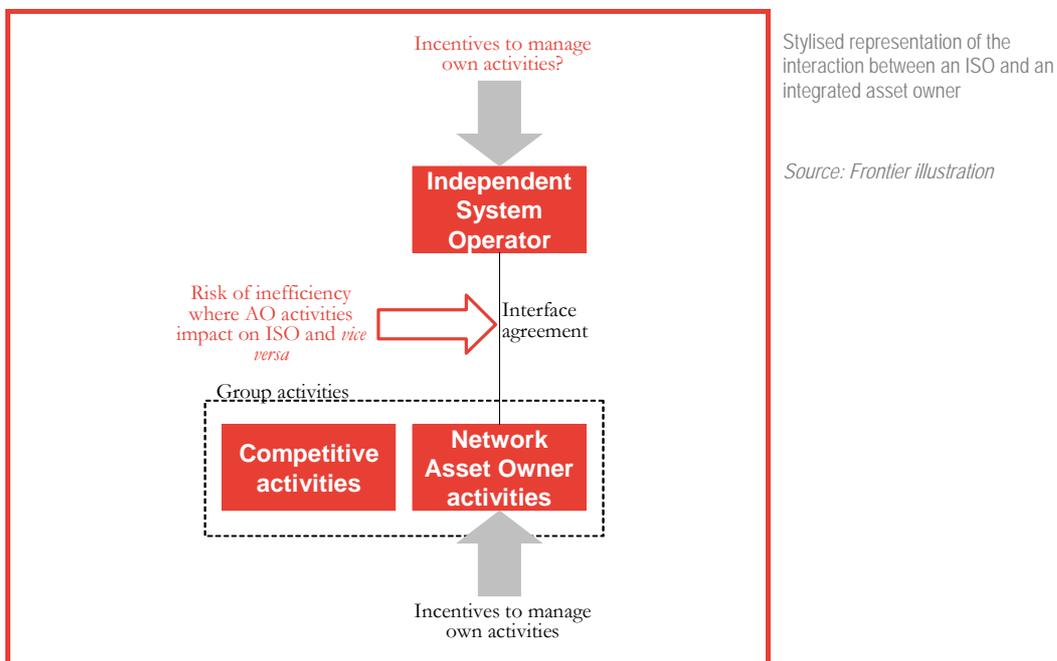
To get this right requires a clear understanding of why certain activities are managed within single companies, rather than left to interactions between individuals governed by contracts. The reasons for undertaking groups of activities within a single firm include:

- a reduction in transaction costs; and
- the difficulty in writing “complete” contracts, which would provide the right incentives for counterparties in all situations.

The question in this instance is whether contracts that embed the right incentives can be written into the relationship between an integrated network company (and asset owner) and an ISO, and whether the transaction costs created by the separation are likely to be less than the gains from increased competition.

### IT'S ALL ABOUT INCENTIVES

Transmission network operators carry out a wide range of tasks, from short-term management (balancing and despatch) to longer-term planning (network expansion and reinforcement). Since electricity or gas transmission is typically a natural monopoly, the incentives to perform these activities effectively and efficiently have to come from regulation.



An independent ISO would take on the day-to-day operation of a subset of these responsibilities, which would still need to be subject to some regulation to ensure that they were carved out in a manner consistent with consumers' interests. Since the ISO would not own the network assets, it would have a weaker balance

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sheet than a combined owner-operator. This raises questions for the EC, since it might make an ISO more risk-averse, and also blunt the force of regulation.

More questions arise in relation to the scope of the interface agreement between asset owner and ISO. This will be the principal mechanism for ensuring that each has the right incentives where their actions have an impact on the other. For example, suppose the ISO undertakes maintenance, while the asset owner determines investment. The interface agreement would need to ensure that:

- the asset owner takes account of the potential impact of network capital expenditure on ISO costs (e.g., where investment may reduce congestion); and
- the ISO takes account of the potential impact of maintenance on the need for investment and maintenance (e.g., where one may be less efficient than the other).

Writing a contract that identifies all these cross-effects and ensures that the appropriate incentives are in place, even in this apparently straightforward example, will need care. The EC and/or national regulators will want to focus on two key issues.

- **The split of responsibilities between the asset owner and ISO.** Ideally, the split should be such that interactions across the interface carry little risk of creating inefficiencies if the contract does not perfectly recreate the incentives that would a single owner-operator. In addition, it might be desirable to limit interactions to those for which it is easier to write contracts; this would mean, for example, ensuring that day-to-day activities (where decisions are more difficult to contractualise) are managed within a single entity.
- **The implications of the interface agreement for incentives.** This will not only require careful design but may also necessitate adjustments to the regulatory framework originally put in place to govern a single entity. In addition, further financial incentives may need to be built into the contract to reinforce the regulatory regime.

## CONCLUSION

Getting the right model for unbundling and ensuring it is appropriately implemented is clearly a challenging prospect. However, despite the additional complexities, the ISO model should not be ruled out. If the roles of the respective entities are defined carefully and the interface contract is well designed, it should be possible to achieve more efficient outcomes – and so, better functioning European energy markets.

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