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ENTSO-E Bidding Zones review survey on market liquidity

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EFET response – 20 November 2017

EFET thanks ENTSO-E for giving us the opportunity to comment on this survey analysing the expected liquidity of the various markets in the context of potential new bidding zones configurations. We would like to stress that **our high-level qualitative assessment, and that of other stakeholders responding to this informal consultation within the ENTSO-E Bidding Zones Stakeholder Advisory Group (BZ SAG), should be an integral part of, but should not replace the analysis that ENTSO-E is mandated to perform on market efficiency** in the different bidding zones re-delineation scenarios.

We note once again that with only one – quite limited – bidding zones merger scenario, the review misses the opportunity to analyse the effect on both network management and market efficiency of merging bidding zones in the same way it does so for splitting them. We repeatedly made this request over the past five years, and we are disappointed to see it not go through even after the decision of ENTSO-E not to proceed with the model-based scenarios, which we expect will free up time for the team working on the bidding zones review.

As ENTSO-E is well aware, EFET favours stability in the configuration of bidding zones along the lines of long-standing structural congestions. This certainty and continuity are essential to underpin cross-border competition, liquidity in the forward, day-ahead and intraday wholesale power markets. Liquid wholesale markets are key to manage and reduce risks for market participants, and thus to allow for timely investments in generation, storage and demand response. By lowering risks and thereby risk premiums, liquid wholesale markets bring down financing costs for investments. This results in a general increase in socio-economic welfare.

A stable configuration of bidding zones should produce reliable price signals, and, especially in the case of larger zones where many generators and suppliers are active, underpin competition between market participants across all timeframes of the market. **Stability and certainty in the delineation of bidding zones is particularly important in current period of uncertainty for the market**, with many new features being implemented such as CORE day-ahead flow-based market coupling, the upcoming establishment of the XBID cross-border intraday continuous trading platform, and various challenges relating to the performance of coupling algorithms. Any review of the delineation of bidding zones, even a review implicating just two zones or nations, must be transparently organised and objectively implemented. It must take in a serious and thorough analysis of market efficiency, including effects on competition and liquidity, in different bidding zone configuration scenarios.

We welcome the consideration of forward market liquidity in the survey circulated by ENTSO-E to the members of the BZ SAG, after EFET and other market participant representatives long insisted on the importance of considering this timeframe in the liquidity analysis. **Market efficiency however does not stop at liquidity. Competition, both at the wholesale and retail levels, is also a vital element of it. We expect ENTSO-E to conduct proper scrutiny on the competition effects of the different scenarios as part of its market efficiency analysis before submitting its final review proposal.**

In the table below we have indicated the expected liquidity effects of the potential changes in bidding zones delineation according to the different expert-based scenarios of the review.

Type of market	Answer type	Impact by "DE/AT"-Split	Impact by "Big Country Split 1"	Impact by "Big Country Split 2"	Impact by "Merge"
Intraday trading	Expected Change of liquidity	**Decrease** (DE: no material change; AT: strong decrease)	**Strong decrease** (DE North: decrease; DE South: decrease; AT: strong decrease; FR North: decrease: FR South: decrease; PL West: n/a; PL East: n/a)	**Strong decrease** (DE North: decrease; DE South: decrease; DE West: decrease; AT: strong decrease; FR North: decrease: FR Central: decrease; FR South: decrease; PL West: n/a; PL East: n/a)	**Increase** (BE-NL: increase; CZ-SK: no material change or increase)
	Explanation	• **DE**: Liquidity is expected to remain stable or only slightly decrease on the German ID market. • **AT**: Liquidity is expected to decrease sharply on the Austrian ID market.	• **DE North**: Liquidity is expected to decrease on the German North ID market. Also, this market will be negatively affected by an imbalance between a large power generation fleet (incl. RES-E) and limited demand. • **DE South**: Liquidity is expected to decrease on the German South ID	• **DE North**: Liquidity is expected to decrease on the German North ID market. Also, this market will be negatively affected by an imbalance between a large power generation fleet (incl. RES-E) and limited demand. • **DE South**: Liquidity is expected to decrease on the German South ID	• **BE-NL**: Liquidity on the Belgian and the Dutch ID markets is rather hampered by the size of the bidding zones than by an inappropriate market design. Merging the two zones into one would increase liquidity on the joint ID market. However, the joint bidding zones would still be too small to experience

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			market. Also, this market will be negatively affected by an imbalance between a limited power generation fleet (incl. RES-E) and strong demand. • **AT**: Liquidity is expected to decrease sharply on the Austrian ID market. • **FR North**: Liquidity is already poor on the French ID market, mainly as a result of market design choices. It is expected to further decrease. • **FR South**: Liquidity is already poor on the French ID market, mainly as a result of market design choices. It is expected to further decrease. • **PL West**: Poland being a central dispatch model, there is no market for ID to speak of as far as our understanding of a market is concerned, where market participants freely exchange bids and offers. Volumes exchanged with the TSO in the ID timeframe are expected to remain stable. • **PL East**: Poland being a central dispatch model, there is no market for ID to speak of as far as our understanding of a market is	market. Also, this market will be negatively affected by an imbalance between a limited power generation fleet (incl. RES-E) and strong demand. • **DE West**: Liquidity is expected to decrease on the German West ID market. • **AT**: Liquidity is expected to decrease sharply on the Austrian ID market. • **FR North**: Liquidity is already poor on the French ID market, mainly as a result of market design choices. It is expected to further decrease. • **FR Central**: Liquidity is already poor on the French ID market, mainly as a result of market design choices. It is expected to further decrease. • **FR South**: Liquidity is already poor on the French ID market, mainly as a result of market design choices. It is expected to further decrease. • **PL West**: Poland being a central dispatch model, there is no market for ID to speak of as far as our understanding of a market is concerned, where market participants freely exchange bids and offers.	a significant increase in ID liquidity • **CZ-SK**: Liquidity on the Czech and the Slovak ID markets is hampered both by the size of the bidding zones and market design choices. Merging the two zones into one without market design reform would likely not result in any material change, or at best in a slight increase of liquidity on the joint ID market.

			concerned, where market participants freely exchange bids and offers. Volumes exchanged with the TSO in the ID timeframe are expected to remain stable.	Volumes exchanged with the TSO in the ID timeframe are expected to remain stable. • **PL East**: Poland being a central dispatch model, there is no market for ID to speak of as far as our understanding of a market is concerned, where market participants freely exchange bids and offers. Volumes exchanged with the TSO in the ID timeframe are expected to remain stable.	
Day-ahead trading	Change of liquidity	**Decrease** (DE: no material change; AT: strong decrease)	**Strong decrease** (DE North: decrease; DE South: decrease; AT: strong decrease; FR North: decrease: FR South: decrease; PL East: no material change or increase; PL West: no material change)	**Strong decrease** (DE North: decrease; DE South: decrease; DE West: decrease; AT: strong decrease; FR North: decrease; FR Central: decrease; FR South: decrease; PL East: no material change or increase; PL West: no material change)	**Increase** (BE-NL: increase; CZ-SK: no material change or increase)
	Explanation	• **DE**: Liquidity is expected to remain stable or only slightly decrease on the German DA market. • **AT**: Liquidity is expected to decrease sharply on the Austrian DA market. Price sensitivity on the Austrian market will sharply	• **DE North**: Liquidity is expected to decrease on the German North DA market. Also, this market will be negatively affected by an imbalance between a large power generation fleet (incl. RES-E) and limited demand. • **DE South**: Liquidity is expected to decrease on the German South DA market. Also, this	• **DE North**: Liquidity is expected to decrease on the German North DA market. Also, this market will be negatively affected by an imbalance between a large power generation fleet (incl. RES-E) and limited demand. • **DE South**: Liquidity is expected to decrease on the German South DA market. Also, this	• **BE-NL**: Liquidity on the Belgian and the Dutch DA markets is rather hampered by the size of the bidding zones than by an inappropriate market design. Merging the two zones into one would slightly increase liquidity on the joint DA market, and reduce price sensitivity. However, the joint bidding zones would still be too

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		increase, which even with market coupling will affect the Austrian DA market (incl. OTC) directly.	market will be negatively affected by an imbalance between a limited power generation fleet (incl. RES-E) and strong demand. • **AT**: Liquidity is expected to decrease sharply on the Austrian DA market. Price sensitivity on the Austrian market will sharply increase, which even with market coupling will negatively affect the Austrian DA market (incl. OTC) directly. • **FR North**: Liquidity is expected to decrease sharply on the French North DA market. Price sensitivity on the French North market will sharply increase, which even with market coupling will negatively affect the French North DA market (incl. OTC) directly. • **FR South**: Liquidity is expected to decrease sharply on the French South DA market. Price sensitivity on the French South market will sharply increase, which even with market coupling will negatively affect the French South DA market (incl. OTC) directly. • **PL West**: Liquidity on the Polish West DA market is	market will be negatively affected by an imbalance between a limited power generation fleet (incl. RES-E) and strong demand. • **DE West**: Liquidity is expected to decrease on the German West DA market. • **AT**: Liquidity is expected to decrease sharply on the Austrian DA market. Price sensitivity on the Austrian market will sharply increase, which even with market coupling will negatively affect the Austrian DA market (incl. OTC) directly. • **FR North**: Liquidity is expected to decrease sharply on the French North DA market. Price sensitivity on the French North market will sharply increase, which even with market coupling will negatively affect the French North DA market (incl. OTC) directly. • **FR Central**: Liquidity is expected to decrease sharply on the French Central DA market. Price sensitivity on the French Central market will sharply increase, which even with market coupling will negatively affect the French Central	small to experience a significant increase in DA liquidity. • **CZ-SK**: Liquidity on the Czech and the Slovak DA markets is hampered both by the size of the bidding zones and market design choices. Merging the two zones into one without market design reform would likely not result in any material change, or at best in a slight increase of liquidity on the joint DA market.

			expected to remain stable, though it could benefit from a slight increase due to the reduction of unscheduled flows at the PL-DE border. • **PL East**: Liquidity on the Polish East DA market is expected to remain stable.	DA market (incl. OTC) directly. • **FR South**: Liquidity is expected to decrease sharply on the French South DA market. Price sensitivity on the French South market will sharply increase, which even with market coupling will negatively affect the French South DA market (incl. OTC) directly. • **PL West**: Liquidity on the Polish West DA market is expected to remain stable, though it could benefit from a slight increase due to the reduction of unscheduled flows at the PL-DE border. • **PL East**: Liquidity on the Polish East DA market is expected to remain stable.	
Forward / future market – shorter period (e.g. one year-ahead base load product)	Expected Change of liquidity	**Decrease** (DE: no material change; AT: strong decrease)	**Strong decrease** (DE North: strong decrease; DE South: strong decrease; AT: decrease; FR North: no material change or decrease: FR South: decease; PL West: no material change or decrease; PL East: decease)	**Strong decrease** (DE North: strong decrease; DE South: strong decrease; DE West: strong decrease; AT: decrease; FR North: no material change or decrease: FR Central: decrease; FR South: decrease; PL West: no material change or decrease; PL East: decrease)	**No material change** (BE-NL: no material change or increase; CZ-SK: no material change)
	Explanation	• **DE**: Market participants in both Germany and Austria are likely to mainly rely	• **DE North**: Splitting Germany into two bidding zones means the German market is likely to no longer serve as a reference and	• **DE North**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and	• **BE-NL**: While the Belgian-Dutch merger may slightly boost liquidity in the forward market for the joint bidding

		on the German market alone for forward trades. This means that the German forward market will remain stable, as the hub for forward trading (including hedging) for the region it is today. • **AT**: As a consequence of the above, we do not expect the Austrian market to develop a liquid local forward market. Market participants in Austria will rely on the liquid German market for forward trading (incl. hedging). As far as hedging is concerned, this means that Austrian market participants will use imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase	pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE North. • **DE South**: Splitting Germany into two bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE South. • **AT**: Considering the relatively small size of the Austrian market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Austrian market than the case when Germany is one single bidding zone ("DE-AT split scenario"). However, Austrian market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Austria, as well as the cost for the development of long-term projects. • **FR North**:	pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE North. • **DE South**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE South. • **DE West**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE West. • **AT**: Considering the relatively small size of the Austrian market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Austrian market than the case when Germany is one single bidding zone ("DE-AT split scenario"). However, Austrian market participants	zone, it would not result in the creation of a sufficiently large bidding zone to draw liquidity at a level that would allow reducing bid-ask spreads, limit price sensitivity, etc. Market participants in the joint bidding zone are likely to continue to rely on the German-Austrian market alone for forward trades (incl. hedging), as they do today. • **CZ-SK**: As the Czech-Slovak merger would not result in the creation of a significantly large bidding zone, market participants in the joint bidding zone are likely to continue to rely on the German-Austrian market alone for forward trades (incl. hedging), as they do today.

		the cost of hedging in Austria, as well as the cost for the development of long-term projects.	Considering the relatively small size of the French North market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the French North market than if Germany had remained one single bidding zone. However, France North market participants are likely to remain in the position to rely on imperfect hedges (or “dirty hedges”) to mitigate price and volume risks. This will increase the cost of hedging in France North, as well as the cost for the development of long-term projects. • **FR South**: Considering the relatively small size of the French North market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France South market participants will remain in the	are likely to remain in the position to rely on imperfect hedges (or “dirty hedges”) to mitigate price and volume risks. This will increase the cost of hedging in Austria, as well as the cost for the development of long-term projects. • **FR North**: Considering the relatively small size of the French North market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the French North market than if Germany had remained one single bidding zone. However, France North market participants are likely to remain in the position to rely on imperfect hedges (or “dirty hedges”) to mitigate price and volume risks. This will increase the cost of hedging in France North, as well as the cost for the development of long-term projects. • **FR Central:** Considering the relatively small size of the French Central market, we do not expect it market to develop a liquid local	

			position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France South, as well as the cost for the development of long-term projects. • **PL West**: Considering the relatively small size of the Polish West market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Polish West market than if Germany had remained one single bidding zone. However, Poland West market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland West, as well as the cost for the development of long-term projects. • **PL East**: Considering the relatively small size of the polish East market, we do not expect it market to develop a liquid local forward market. This zone would also be too	forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France Central market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France Central, as well as the cost for the development of long-term projects. • **FR South**: Considering the relatively small size of the French South market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France South market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging	

			far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. Poland East market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland East, as well as the cost for the development of long-term projects.	in France South, as well as the cost for the development of long-term projects. • **PL West**: Considering the relatively small size of the Polish West market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Polish West market than if Germany had remained one single bidding zone. However, Poland West market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland West, as well as the cost for the development of long-term projects. • **PL East**: Considering the relatively small size of the Polish East market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to	

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Forward / future market – longer period (e.g. three year-ahead base load product)	Expected Change of liquidity	**Decrease** (DE: no material change; AT: strong decrease)	**Strong decrease** (DE North: strong decrease; DE South: strong decrease; AT: decrease; FR North: no material change or decrease: FR South: decease; PL West: no material change or decrease; PL East: decease)	**Strong decrease** (DE North: strong decrease; DE South: strong decrease; DE West: strong decrease; AT: decrease; FR North: no material change or decrease: FR Central: decrease; FR South: decrease; PL West: no material change or decrease; PL East: decrease)	**No material change** (BE-NL: no material change or increase; CZ-SK: no material change)
	Explanation	• **DE**: Market participants in both Germany and Austria are likely to be mainly reliant on the German market alone for forward trades. This means that the German forward market will remain stable, as the hub for forward trading (including hedging) for the region it is today. • **AT**: As a	• **DE North**: Splitting Germany into two bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE North. • **DE South**: Splitting Germany into two bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward	• **DE North**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE North. • **DE South**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward	• **BE-NL**: While the Belgian-Dutch merger may slightly boost liquidity in the forward market for the joint bidding zone, it would not result in the creation of a sufficiently large bidding zone to draw liquidity at a level that would allow reducing bid-ask spreads, limit price sensitivity, etc. Market participants in the joint bidding zone are likely to continue to rely on the German-Austrian market alone for forward trades (incl.

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		consequence of the above, we do not expect the Austrian market to develop a liquid local forward market. Market participants in Austria will rely on the liquid German market for forward trading (incl. hedging). As far as hedging is concerned, this means that Austrian market participants will use imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Austria, as well as the cost for the development of long-term projects.	trading for DE South. • **AT**: Considering the relatively small size of the Austrian market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Austrian market than the case when Germany is one single bidding zone ("DE-AT split scenario"). However, Austrian market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Austria, as well as the cost for the development of long-term projects. • **FR North**: Considering the relatively small size of the French North market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the French North market than if Germany had remained one single bidding	trading for DE South. • **DE West**: Splitting Germany into three bidding zones means the German market is likely to no longer serve as a reference and pool of liquidity for the whole region. We expect a sharp decrease in liquidity in forward trading for DE West. • **AT**: Considering the relatively small size of the Austrian market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Austrian market than the case when Germany is one single bidding zone ("DE-AT split scenario"). However, Austrian market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Austria, as well as the cost for the development of long-term projects. • **FR North**: Considering the relatively small size of the French North market, we do not expect it market to	hedging), as they do today. • **CZ-SK**: As the Czech-Slovak merger would not result in the creation of a significantly large bidding zone, market participants in the joint bidding zone are likely to continue to rely on the German-Austrian market alone for forward trades (incl. hedging), as they do today.

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			zone. However, France North market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France North, as well as the cost for the development of long-term projects. • **FR South**: Considering the relatively small size of the French South market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France South market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France South, as well as the cost for the development of long-term projects. • **PL West**: Considering the relatively small size of the Polish West market, we do not expect it market to	develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the French North market than if Germany had remained one single bidding zone. However, France North market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France North, as well as the cost for the development of long-term projects. • **FR Central:** Considering the relatively small size of the French Central market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France Central market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price	

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			develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture for the Polish West market than if Germany had remained one single bidding zone. However, Poland West market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland West, as well as the cost for the development of long-term projects. • **PL East**: Considering the relatively small size of the polish East market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. Poland East market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase	and volume risks. This will increase the cost of hedging in France Central, as well as the cost for the development of long-term projects. • **FR South**: Considering the relatively small size of the French South market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. France South market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in France South, as well as the cost for the development of long-term projects. • **PL West**: Considering the relatively small size of the Polish West market, we do not expect it market to develop a liquid local forward market. The loss of liquidity in the German forward market may, however, lead to a slightly less bleak picture	

			the cost of hedging in Poland East, as well as the cost for the development of long-term projects.	picture for the Polish West market than if Germany had remained one single bidding zone. However, Poland West market participants are likely to remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland West, as well as the cost for the development of long-term projects. • **PL East**: Considering the relatively small size of the polish East market, we do not expect it market to develop a liquid local forward market. This zone would also be too far removed and would have too few market participants to benefit from the loss of liquidity in the German forward market to grow its own forward market. Poland East market participants will remain in the position to rely on imperfect hedges (or "dirty hedges") to mitigate price and volume risks. This will increase the cost of hedging in Poland East, as well as the cost for the development of long-term projects.	