

## **Non-paper on TTF and representative benchmarks for wholesale natural gas**

This paper analyses the TTF (Dutch Title Transfer Facility main index used in Europe for long-term contracts) role and representativeness. It also provides recommendations for its further financial surveillance to increase its transparency and for developing additional complementary benchmarks for the current environment (e.g. LNG).

This **non-paper provides a preliminary assessment** of options for EU initiatives tackling energy prices, security of supply and sustainability. It should not be considered a Commission policy note. As such, the non-paper has not been subject to inter-service consultation or review by the Secretariat-General or the Legal Service, nor has it obtained political validation of the Executive Vice President for the European Green Deal or of the Commissioner for Energy.

### **Executive summary:**

- The TTF (Dutch Title Transfer Facility) is a system registering the delivery of gas in the Dutch gas system.
- It is also the main index used in Europe for long-term contracts.
- The TTF is a virtual market place where gas that is already present in the Dutch gas system ('entry-paid gas') is traded (i.e. after import, regasification and injection in the EU pipeline system).
- While representative for the market in Northwestern Europe, due to its trading volume and liquidity, the TTF influences other EU hubs that otherwise would be closer to LNG import prices.
- While functioning appropriately for its main purpose (trading system in the Netherlands), due to the current bottlenecks in Northwestern Europe (that have put a premium on its level) and the current extreme market environment, questions have been raised about its representativeness for the whole of the EU market.
- LNG spot prices have significantly diverged from TTF futures for a while now, which suggests that LNG cargoes and pipeline gas are two separate markets.
- Prices for LNG cargoes are now largely influenced by the fact that Europe is competing with Asia for spot LNG cargoes and therefore that the LNG prices in the Atlantic basin are now influenced by Asian fundamentals (and not what happens on a local European trading hub).
- It should be noted that positive effects on prices will come mainly from actions reducing demand or increasing supply. The policy avenues included below would target the better functioning of the market with increased transparency to avoid short-time high volatility events and remove premiums due to specific environments.

*Recommendations:*

*A- Additional transparency for better functioning markets*

- As a no regret option, it could be explored if it would make sense to subject the TTF to the financial supervision, to avoid any possible speculative moves.
- This could include (i) requesting ESMA to study the TTF alleged exemption under the EU Benchmark Regulation, (ii) ensuring that MiFID circuit breaker rules apply, (iii) strengthening adequately existing energy regulatory framework applicable for futures (REMIT regulation) as part of the Electricity Market Design work and (iv) exploring if an art 122 proposal can cater for an intervention in the market in case of emergency.

*B- Developing alternative benchmarks for natural gas*

- The possibility for **developing additional complementary benchmarks for natural gas transactions** (mainly at import level, or in regions not affected by current bottlenecks in Northwestern Europe) could ensure a better functioning market (in particular for contract indexation) with reduced short-term high volatility events.
- This could include (i) further exploring with a commodities price reporting agencies (PRA) the possibility to produce/support this additional index or (ii) in the longer term, establishing an EU clearing centre to report the additional index. A European trading platform for LNG could even be considered.
- Additional models include **separating LNG deliveries from pipeline ones, in order to impose a cap on the latter** (which has less alternatives) while continuing to pay a premium for the former (for instance through auctions). This could include setting a price cap through the TSO's balancing price (with rationing); and/or regulating interval price limits at exchanges.
- As a last resort measure in case of supply disruption in Europe and skyrocketing prices linked to a mismatch between supply and demand, an alternative that could be explored would be to peg the TTF at a slightly higher volume than the JKM (Asian benchmark) with an article 122 intervention. In this case, we would be talking about a JKM+€1 model that would make still possible to attract LNG. However, this would require the use of other hubs/mechanisms to allocate gas inside Europe.
- **The Commission could commission a study to that end in September 2022 including the possibility of further legal proposals.**

## I – Definition of the issue /objective

**The Dutch Title Transfer Facility (TTF) emerged in the past years as the reference benchmark trusted by the market.** While historically the NBP had had this position, the TTF very quickly over the years 2015-2019 took over this position, becoming by very far the most liquid and active hub in the EU. The success of the TTF made it a reference index in the industry, even outside Europe<sup>1</sup>.

**Due to its liquidity and transaction volume, the TTF serves as an index for other European gas hubs, influencing transaction prices across the EU, from import to tariffs.** For instance, the TTF is used as an index in price-formulas for a wide range of contracts, from import long-term contracts to retail contracts. Since the TTF is a wholesale reference, the relevance of its use in import contracts is a question today.

**The TTF gas contract prices, widely used in the EU gas markets as a benchmark, have surged since last autumn by ten times.** The main reasons behind this drastic increase are the invasion of Ukraine by Russia, the current security of supply concerns related to a natural gas full or partial natural gas disruption and more widely the weaponisation of gas supply by Russia.

**The TTF is currently trading at exceptionally high premiums vis-à-vis other European gas hubs (by up to 70-80 EUR/MWh), in particular since the announcement by Gazprom that Nordstream 1 would operate at 20% of its capacity.** TTF month-ahead prices are above 200 €/MWh from historical average over the past decade at around 15-20 €/MWh reflecting a tighter gas market in Northwestern and Central Europe.

**As a result, the price premium between the TTF and Europe's LNG delivered ex-ship (DES) indices has widened significantly bringing up questions about its representativeness as an index for linking the contracts in the whole EU-27.** This includes the DES Northwest Europe (NWE) Marker and indexes related to other hubs such as the UK's National Balancing Point (NBP), France (PEG) and Spain's virtual balancing point (PVB) which are trading at around 30% less than the TTF index. The spread is due to capacity constraints (infrastructure bottlenecks) on LNG import facilities close to Europe's main demand hub around the Netherlands and Germany, as well as limits on the amount of gas that can flow from the UK, Spain and France into continental Europe's heartland that prevent prices of the different markers to converge.

**Due to the connectivity with Germany, France, the Benelux, the UK and Norway, the TTF is an essential gateway in the supply of natural gas to North-West Europe<sup>2</sup>.** TTF prices would have a direct influence in wholesale gas transactions in the region that would be most affected in case of a disruption of gas supplies from Russia.

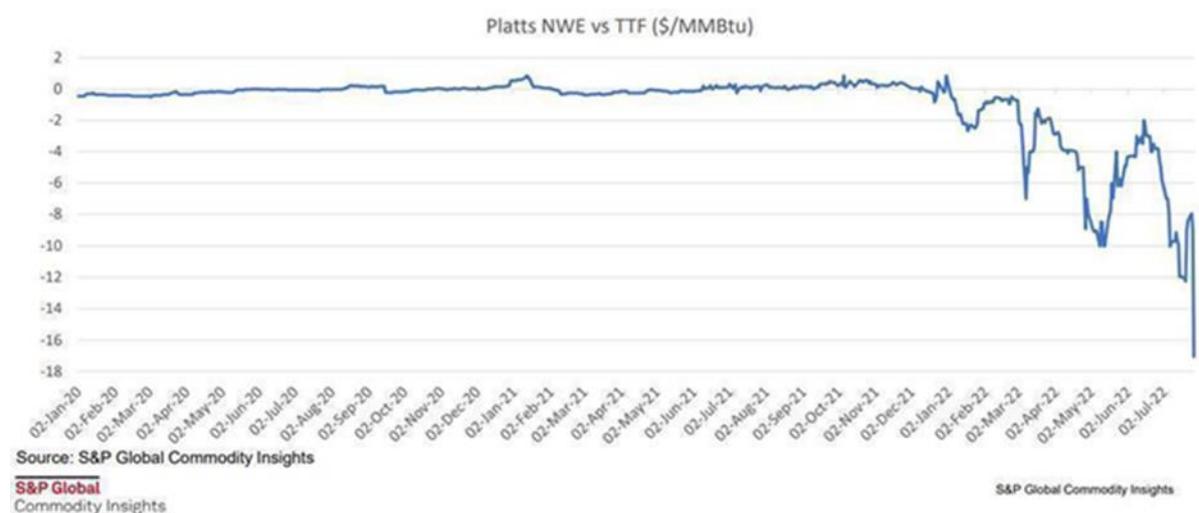
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<sup>1</sup> With the expansion of US LNG trading helping to boost interest in TTF, traders outside Europe have increasingly linked their sales to TTF hub. Bloomberg reports LNG tenders from Argentina or Turkey are being priced at a premium or discount to TTF, while Asia-Pacific traders are forced to price their bids at a premium to TTF to attract cargoes.

<sup>2</sup> "Gas roundabout" was the expression used by the Dutch government in 2005 when it presented its strategy to strengthen and develop the role of the TTF, and has been used extensively in literature when describing the TTF (e.g. Oxford Institute for Energy).

**LNG spot prices today are lower than TTF (NWE DES has deviated from TTF), mostly linked to the fact EU regasification terminals are already running at full capacity and limited export capacity between Spain, France, the UK and the rest of Europe, which prevent prices of TTF and NWS DES to converge.** This can be seen with the levels of Spanish and French hub prices, which are much more LNG dependent and have deviated from TTF in the past months (so has the NBP, the UK benchmark).

It could therefore be concluded that LNG markers represent the price of international gas markets, while TTF is a North-Western and Central Europe inland benchmark.



**The objective of this note is to reflect on the case for possible complementary policy avenues to develop additional representative and transparent benchmarks for natural gas transactions (mainly at import level, or in regions not affected by current bottlenecks in Northwestern Europe) to ensure a better functioning market (in particular for contract indexation) with reduced short-term high volatility events.**

Three particular aspects to be further analysed seem particular:

1. Potential alternative benchmarks to be referenced (alongside the TTF<sup>3</sup>) by some EU companies for import long-term contract indexation or price formulas (depending on which benchmark they would consider more appropriate)

<sup>3</sup> While there are claims that TTF is currently not representative of gas market transactions, and that it is overpriced, the TTF index seems to be delivering on its objectives of a representative index of gas wholesale prices in Northern Europe reflecting current uncertainties and perception by market players of gas market fundamentals. However, it does not preclude the development of complementary benchmarks.

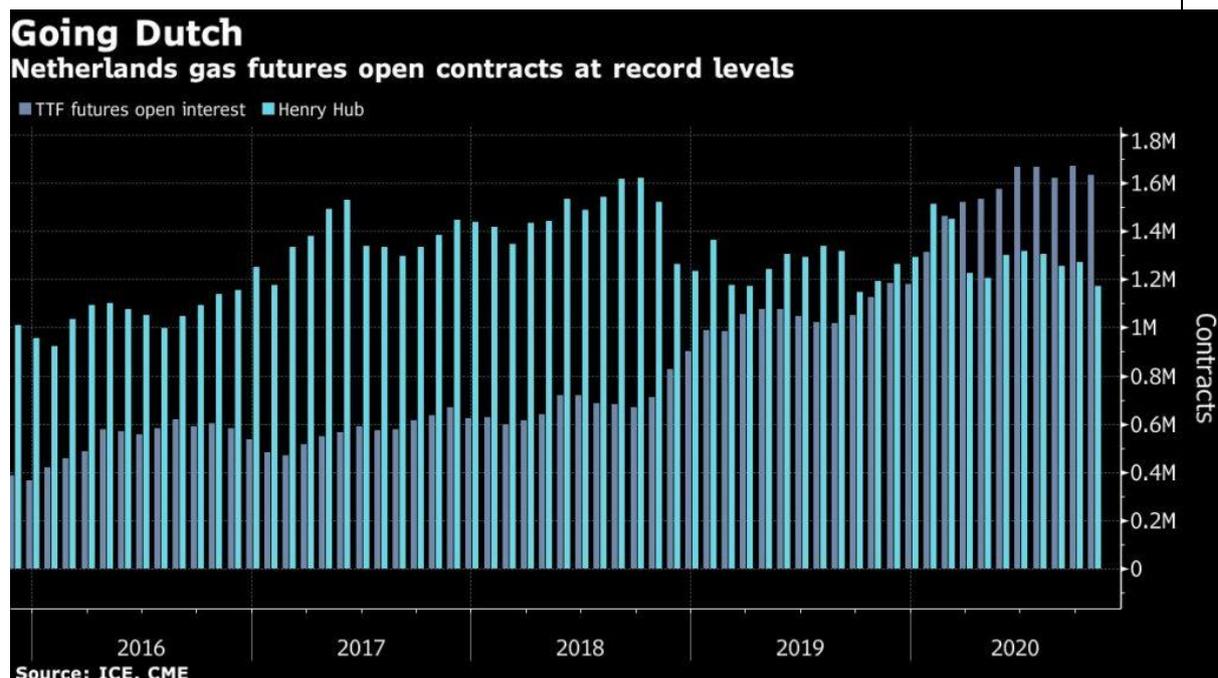
2. Benchmarks to be used in the negotiation of gas purchase agreements with third country as part of the work under the EU Energy Platform
3. Finally, as an alternative to price caps, it elaborates on possible measures to contain the volatility within certain bands. (e.g. subjecting TTF to financial regulation to increase transparency or temporarily pegging TTF to JKM).

### Box 1 - What is the TTF and why does it matter?

The TTF is a system registering the delivery of gas in the Dutch gas system. The facility allows for gas to be traded within the Dutch Gas Network. TTF is a virtual market place where gas that is already present in the Dutch gas system ('entry-paid gas') is traded (i.e. after import, regasification and injection in the EU pipeline system).

It is operated by the Dutch gas TSO, Gasunie Transport Services (GTS), as an alternative to the United Kingdom's National Balancing Point (NBP). Trading on the Dutch system is organised either bilaterally between traders (shippers) or through organised energy exchange. Physical short-term gas and gas futures contracts are traded and handled by the ICE-Endex Exchange (Amsterdam) and via the PEGAS exchange. Gas at TTF trades in euros per megawatt hour.

It is now mainland Europe's largest, trading more than 14 times the amount of gas used in the Netherlands and has become the most liquid pricing location in Europe, often serving as a pricing proxy for the overall European LNG import market. The location at which the country is located (neighbouring France and Germany) also played a natural role in its advantage and helped in the growth of the entire system. The TTF enjoys the pipeline investments that the country made in the early 2000s, that allow bi-directional flow of gas. The system works even when the country is a net exporter and an importer. A pipeline up-gradation project with the UK was completed in 2019 and allowed the TTF to absorb gas coming from the UK as well. The Dutch network became a roundabout for North-West Europe.



The surge in the volume of futures trading over the TTF has catapulted its value in the global natural gas trading market. The volume according to ICE increase by about 24% in 2020 after witnessing a 100% growth over the last two years. Why TTF has increased its dominance is because of the simultaneous decline in the volume traded over the US's Henry Hub Benchmark which started declining from its 2018 peak. For a long time, the US market was seen as the dominant standard in deciding the price of trade but the emergence of the Dutch Market enabled the shareholders to take a more regional control over the import of billions of euros worth of gas every year. It can be seen more frequently these days that LNG (Liquefied Natural Gas) deals are also referring to TTF, even Asian markets are using TTF for trading.

**However, TTF is not an/the LNG benchmark:** it is an inland benchmark/contract/hub for the wholesale market, not for the spot import price of LNG. Shippers often manage price risks by transacting on the TTF or linking their prices in contracts to the TTF price even if they need to deliver gas elsewhere in Europe. The TTF price is also often part of the price formulas in many long-term gas contracts. The LNG benchmark/price assessment that is used for fixing prices for LNG in Europe is NWE DES, although some long-term contracts use the TTF in their price formulas.

While any action on the TTF could influence wholesale gas prices within the EU, its impact on import prices (in particular for spot transactions) would be limited.

**There have been different proposals to 'freeze' the TTF price.** This is a decision that would pertain Dutch Securities Regulator in the current framework. In discussions with the regulator so far, it has been mentioned that this is not contemplated: the TTF is considered to be functioning well by the regulator who would like to prevent any market disruption/malfunctioning. While it could be theoretically considered to impose such a 'freeze' under an art 122 instrument, this would have several challenges:

- Nothing obliges operators to trade in the TTF and there could be a move to OTC (off the counter) operations with lower transparency
- The credibility of the exchange could be damaged and it could disrupt market functioning while not delivering necessarily short-term relief on prices
- The establishment of a cap could lead to unserved demand at certain price levels and even induce black-outs. In that sense, any cap introduction should be brought in conjunction with the implementation of demand reduction measures.
- Legal aspects would have to be weighted as it could be perceived as a change in contract conditions (*n.b. Legal Service to confirm*)

**In order to disrupt as little as possible the market in the current circumstances, the note assesses complementary avenues that would maintain TTF functioning.**

## **II – Options available**

Several options could be further explored to enhance the availability of wholesale gas benchmarks properly reflecting the situation of the market for each European region and for each step in the trade process of gas (and therefore limiting episodes of extreme short-term volatility):

1. Subject the TTF to financial supervision/enhance REMIT provisions in the current gas legal framework
2. Develop a complementary EU benchmark for import gas transactions

### **1. Subject TTF to financial supervision for increased market transparency**

The first option consists in a more thorough supervision of the TTF.

Currently, the TTF is not subject to financial supervision. ICE (Intercontinental Exchange) argues that the daily settlement prices for the various TTF tenors that are published on its website do not constitute an index within the scope of the EU Benchmark Regulation (BMR), as they rely on a single reference price exemption (which is applicable to the publication of the price of a single financial instrument). Pursuing this line of argument, ICE argues that the various settlement prices published for the different TTF tenors all pertain to a single financial instrument (the “TTF gas future”).

However, the TTF could probably fall within the EU Benchmarks Regulation, as underlying assets seem to be much higher than the EUR 100 million threshold set forth in the Regulation, and that due to the relevance and volume of the TTF, supervision and the application of the regulatory framework would benefit both its transparency and functioning, and act as a preventive tool. The European Securities Regulator ESMA has noted that ICE has not sought their opinion prior to availing of the exemption.

TTF is subject to the REMIT regulation<sup>4</sup> that provides an harmonised framework to ensure wholesale energy market transparency and integrity. As the regulatory framework has been specifically developed to adapt to particularities of energy trading, there could be benefits in strengthening the REMIT regulation to accommodate for adequate aspects of the EU Benchmark Regulation that could apply to TTF. The main benefits would be to overcome some of the legal challenges and better tailor financial regulation framework to energy trading.

### **2. Develop a complementary EU benchmark for import gas transactions**

**A second option would be develop a parallel/complementary EU benchmark for import transactions of gas, that could be referenced by market participants (alongside or instead of the TTF) by some EU companies for long-term contract indexation/price formulas (depending on which benchmark private actors would consider more appropriate to their specific situation).<sup>5</sup>**

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<sup>4</sup> Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency

<sup>5</sup> It should be clear that TTF should not be replaced but could be complemented by another benchmark, allowing market players to decide on which benchmark would be the most suitable for them.

TTF is representative of the situation in Northwestern Europe, but due to its trading volume and liquidity, it influences other EU hubs that otherwise could be more linked to LNG import prices. A parallel, more harmonised EU-wide benchmark in terms of regional balance and supply sources of gas and EU-wide benchmark could bring together the different indexes across the EU for wholesale transactions could represent a more robust alternative. Indeed, it would better represent the realities of the EU gas markets while acting as a preventive mechanism for undue volatility resulting from short-term developments in any single regional hub. Hubs tightly linked to LNG such as PVB (Spain) and PEG (France) or EU LNG markers as NWE DES also exist and could provide a further basis to set a parallel EU benchmark for LNG imports.

**The TTF is a futures contract.** Companies (not Member States) purchase gas via Long Term Contracts or spot purchases. A spot purchase is made several months in advance (usually we consider spot sales concluded within 4-6 months). When a purchase is decided, both the seller and the buyer need to hedge the risk. The hedging can be done either via a forward contract and or via a future (usually coupled to another instrument such as a CfD or similar). Spot LNG deliveries are deliveries contracted and settled months before (especially given the transport delays). Therefore, whatever new benchmark or reference price is designed, in order to be realistically used by the private sector, it would probably have to have a derivatives market in place. Here the main issue will be the liquidity, as today most of the liquidity is kept within TTF.

On other aspects related to representativeness, LNG represents today (record year) max. 25-30% of the gas mix in the EU. Moreover, when Asia will need gas, the JKM will have to attract cargoes, which means the JKM will have to increase over the TTF. Basing a new benchmark on LNG prices could have a counterproductive effect in winter with prices in the EU skyrocketing because of demand in Asia or the EU not necessarily being more attractive than Asia for LNG deliveries. Basing therefore a wider benchmark solely on LNG markets could therefore lack representativeness and expose the EU to world markets in a more direct way.

**Additional models could include separating LNG deliveries from pipeline ones, in order to impose a cap on the latter (which has less alternatives) while continuing to pay a premium for the former (for instance through auctions).** This could include setting a price cap through the TSO's balancing price (with rationing); and/or regulating interval price limits at exchanges. *[n.b. We understand ACER gas team is looking at this possibility]*

Finally, over the medium term, an LNG trading platform (as described by Boltz/Zachmann among others) could be considered<sup>6</sup>.

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<sup>6</sup> [How to make the EU Energy Platform an effective emergency tool \(bruegel.org\)](https://bruegel.org/publications/working-papers/wp-2017-07-how-to-make-the-eu-energy-platform-an-effective-emergency-tool)

**Box: Temporarily pegging TTF to JKM (the Asian benchmark) as a dynamic cap**

As a last resort measure in case of supply disruption in Europe and skyrocketing prices linked to a mismatch between supply and demand, an alternative that could be explored would be to peg the TTF at a slightly higher volume than the JKM (Asian benchmark). In this case, we would be talking about a JKM+€1 model.

It would need to be assessed by the Legal Service if this would present a problem for long-term contracts.

In this situation, JKM would become the world price for international gas for some time. The wholesale market would be therefore determined by LNG supply/demand, and not by the EU's internal bottlenecks. LNG would still be attracted by the fact transport costs are lower to the EU. It could also contribute to avoid Asia to try to outcompete Europe for LNG.

## Several preliminary exchanges have taken place with market intelligence operators (Argus<sup>7</sup> and Standar & Poor's Platts) on the matter:

### *Argus*

- They way Argus assembles their LNG spot market reference price (somewhat misleadingly called the Argus TTF price assessment) is to look at all spot transactions that are reported around a very narrow window at the end of the trading day (16h30 UK/17h30 CET).
- Gas market participants define the spot market as prices for LNG cargoes delivered ex ship (DES) for deliveries across four half-month windows that start 2-5 months forward.
- Argus TTF is called a “time-stamped price” as it is determined at the same time every day. Time-stamped prices allow for a consistent forward curve and comparison with all the other “hub” price assessments that are also time-stamped. All transactions that happen on or around “the close” will be assembled to publish a single figure. They also use the midpoint between the best bid and lowest offer at or around the close to determine their daily reference price (exact details on how this works in their presentation).
- The reason that the TTF price assessment is not a BMR-compliant benchmark resides in the fact that the Argus TTF price assessment is only used as a “benchmark” by LNG trading participants, there are no financial contracts or derivatives referencing it. The acceptance of the Argus TTF price assessment would, of course, be greater if there were derivatives referencing it.
- The main difference between Argus and ICE is that Argus have multiple sources across the market whereas the ICE reference price represents the settlement price of a single financial futures contract traded at the exchange. Argus has no precise information on whether their pricing data contributors overlap with participants in the ICE futures markets, but the ICE market participants are public.
- **Despite the obvious advantage of the Argues TTF price assessment being transaction-based, market participants seem to prefer the ICE TTF futures settlement price over the Argus TTF price assessment, potentially because futures markets have a higher churn rate than spot markets. This preference raises the issue that a financial contract is used as a reference rate for physical LNG deliveries.**
- On the other hand, LNG spot prices have significantly diverged from TTF futures for a while now, which suggests that LNG cargoes and pipeline gas are two separate markets. DES cargoes currently trade at discounts of between USD 14-15 per mn btu – discounts used to be not more 60 cents as late as 2020. This indicates separate markets.
- **In case of consistent discounts between LNG spot prices vs the TTF futures settlement price contracting parties will be less inclined to use TTF futures as a contractual benchmark for NWE deliveries.** Argus anticipates either the emergence of a European or even a global spot price for LNG cargoes, as demand in Asia (notably China more so than Japan) might in future have more impact on NWE LNG spot prices than gas hub prices such as TTF.

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<sup>7</sup> [Natural gas & LNG prices, forecasts & analysis | Argus Media](#)

- **The above raises the issue of whether a cap on LNG imports is either necessary or even useful. The persistent discount between DES cargoes and TTF seems to indicate that market participants have understood that TTF (a pipeline price) is not necessarily representative of the supply and demand patterns that characterise LNG cargoes.** This shows that there are alternatives to capping the TTF (or that capping the TTF might achieve a lot less than its proponents seem to anticipate).

### *Standard and Poor's /Platts*

- **S&P Platts seems a bit more optimistic that the EU market would be approaching a “tipping point” (moving from one index to another) away from TTF for LNG cargoes delivered to Europe.**
- In particular, S&P Platts argues that market participants feel confident referencing a new index when three ingredients are in place:
  - Data history;
  - Significant transaction volume underpinning the index;
  - Transparent price formation.
- Benchmark providers will first look at adoption in the physical markets - this is the driver for forward curves and listed futures.
- **Platts argues that their European LNG indices, notably the Platts DES NWE LNG price assessment, are close to having all three of the above ingredients.**
- The DES NWE LNG price assessment has been published since 2010 (data history), it is based on an active market on close (MOC) process (transparent price formation) and the LNG volumes now arriving in Europe are significant (underpinning volume: over 10 million mt/month, 3x of the average volume for 2018).
- Platts cites a couple of other indicators indicating proximity to a index “tipping point”:
  - The benchmark infrastructure necessary to support the growth of a benchmark that reflects the market for LNG deliveries to European terminals is now largely in place;
  - The policy shift in Europe away from Russian pipeline gas;
  - The increasing deviation between TTF settlement prices and the NWE LNG price assessment.
- Especially the growing basis risk between TTF and NWE LNG (since April) is seen as a significant change in the market that can act as a tipping point from one index to another.
- According to Platts TTF was a good solution as long as the price of a local trading hub (TTF) was a suitable proxy for the broader LNG market. But TTF is no longer a suitable proxy once the TTF vs NWE LNG differential had widened to unprecedented levels.
- **Prices for LNG cargoes are now largely influenced by the fact that Europe is competing with Asia for spot LNG cargoes and therefore that the LNG**

**prices in the Atlantic basin are now influenced by Asian fundamentals (and not what happens on a local European trading hub).**

- Going forward Platts expects to see more LNG transactions into Europe with increasing reference to an LNG price index as opposed to a regional natural gas hub price.
- **The market is already de facto “pegging” the price of European LNG cargoes to what’s happening in Asia (e.g., local re-gasification capacities).**
- A market-led tipping point away from TTF for LNG cargoes might be closer.

### III – Pros and Cons

Option	Pros	Cons/ risks	assessment
<b>Subject TTF to financial regulation to increase transparency in the market</b>  <b>Pending further discussion and agreement with FISMA</b>	Internal (design/implementation) <ul style="list-style-type: none"> <li>- Request ESMA to check if the TTF should be subject to financial supervision.</li> <li>- Should ESMA's assessment concludes that BMR exemption does not apply, legal obligation upon ICE, and supervision mandatory.</li> <li>- Could also be done by strengthening current applicable framework (REMIT regulation) which would simplify legal challenges.</li> </ul>	Internal (design/implementation) <ul style="list-style-type: none"> <li>- ESMA assessment may take time</li> <li>- NL and the Dutch securities regulator may challenge the decision</li> </ul>	+++
	External (market, companies, etc) <ul style="list-style-type: none"> <li>- Increased oversight</li> <li>- Prevention abuse</li> </ul>	External (market, companies, etc) <ul style="list-style-type: none"> <li>- Gasunie/ICE legal challenge</li> </ul>	
<b>Develop new complementary EU benchmarks (to provide an alternative for Long term contract indexation)</b>	Internal (design/implementation) <ul style="list-style-type: none"> <li>- Legal basis and framework</li> <li>- Implementation: private operator or EU agency</li> </ul>	Internal (design/implementation) <ul style="list-style-type: none"> <li>- Time and human resources needed to put in place a new benchmark</li> <li>- Where to base the new benchmark that would avoid issues currently linked to TTF (it should</li> </ul>	+++

Option	Pros	Cons/ risks	assessment
		<p>be made with an average of different regions)</p> <ul style="list-style-type: none"> <li>- Very likely a new benchmark will trigger the need for a derivatives market on new contracts, as hedging will be needed, complexity</li> <li>- Which market reality to represent with the benchmark (e.g. LNG imports?, all imports? other regions?)</li> </ul>	
	<p>External (market, companies, etc)</p> <ul style="list-style-type: none"> <li>- EU oversight, reliability, transparency</li> </ul>	<p>External (market, companies, etc)</p> <ul style="list-style-type: none"> <li>- No uptake by market players (lack of confidence, commercial interests), or</li> <li>- Very long uptake by market players</li> <li>- Need to ensure EU's attractiveness for LNG cargoes</li> <li>- Would it apply only to new contracts?</li> </ul>	--
<p><b>Pegging temporarily TTF to JKM</b></p> <p>(option not fully explored – preliminary assessment)</p>	<p>Internal (design/implementation)</p>	<p>Internal (design/implementation)</p> <ul style="list-style-type: none"> <li>- Legal challenge on acting on a private company index</li> <li>- Legal basis – art 122 TFEU may not allow to act at company level</li> <li>- Risk of geopolitical</li> </ul>	

Option	Pros	Cons/ risks	assessment
		<p>tension in case TTF is set at JKM+1 level as it will undercut Asian countries for LNG supply (this might also create a vicious price circle as prices in Asia will go up as a result to try to attract supply)</p>	
	<p>External (market, companies, etc.)</p> <ul style="list-style-type: none"> <li>- Limit volatility</li> <li>- TTF dependent on reference index (JKM)</li> <li>- EU wholesale price would be capped by LNG supply/demand, and not by internal bottlenecks</li> <li>- As transport prices are lower to the EU, its attractiveness for LNG cargoes vis-à-vis Asia would be in place</li> <li>- Voids Asian markets trying to outcompete on shipments to the EU</li> </ul>	<p>External (market, companies, etc.)</p> <ul style="list-style-type: none"> <li>- Market situation in Asia having a direct effect on EU prices without possibility of control</li> <li>- It might incentivise suppliers to reduce supply to Asia to drive prices up and receive an high prices for volume delivered to Europe</li> <li>- Legal challenge by ICE/Gasunie on acting at the level of a private index</li> <li>- JKM to be the reference price during the pegging period (global price setter)</li> <li>- Reduces importance of EU hubs in global markets</li> <li>-</li> </ul>	

## IV – recommendations

- A. Study the possibility of subjecting the TTF to financial supervision, which would increase surveillance of transactions and could prevent abuse and reduce the scope for speculation and short-term excessive volatility. END 2022
- B. Launch a formal study on the possible development of a parallel EU benchmark for import transactions of gas (The benchmark would have to be designed alongside the purpose it aims to serve in order to align its representativeness with its objective), that could be:
- referenced (alongside or in replacement of TTF) by some EU companies for long-term import contract indexation or price formulas (depending on which benchmark they would consider more appropriate to their specific situation)
  - Used as reference for policy interventions
  - Used as reference for gas purchase agreement with third countries under the EU Energy Platform
- END – first quarter 2023

## V – Implementation (art 122, changes in legal framework, etc...)

### A. Subject TTF to supervision (**pending further discussion and agreement with DG FISMA**)

- Request ESMA to study the TTF alleged exemption under the BMR. Depending on this assessment, launch procedure to discuss with national Dutch authorities subjecting TTF to supervision.
- Ensure that MiFID circuit breaker rules apply. *However, decision on when and how to apply those circuit breaker rules would pertain exclusively to ICE, which means that circuit breakers do not seem fit for purpose in the current context of a possible extreme price increase in the context of full supply disruption from Russia.*
- Need to explore with Legal Service if an art 122 proposal can cater for an intervention in the market that would “stop” the price e.g. for a week in case of emergency.
- Explore if a strengthening of REMIT regulation could contribute to better detect market manipulation and ensure transparency by integrating adequate elements of the BMR and other financial framework into REMIT regulation.

## B. Development of a complementary EU benchmark:

- **Further explore with a commodities price reporting agency (PRA) whether, and under what conditions, such an index could be produced.** If this index needs a boost in terms of market coverage, contemplate mandatory reporting of necessary spot transactions. **Legal base: possible modifications to the EU benchmark regulation creating a new “critical benchmark” category (that allows for mandatory contributions)**
- **To further support the joint purchasing platform, establish an EU clearing centre to receive reporting of all outright prices of LNG or other imports into the EU.** This clearing centre could work on voluntary contributions or contributions might have to be mandated. The clearing centre would be tasked with consolidating the outright prices received intraday (or outright prices of the previous trading day) and publishing the (weighted) average/mean of the reported transaction prices at a pre-determined time of the day. For example, a same day rate would be published at noon, while a daily rate reflecting the previous trading day could be published daily at 9 am. **The clearing centre could be operated by an EU body (e.g., ACER), with the option to outsource the calculation of the daily rate to a private sector ‘calculation agent’.**
- Legal base for the establishment of a clearing centre (as a last resort if no private price reporting agency can be identified): **FISMA advice on possible legal venues.**

*Pegging the TTF to the JKM*

*Need legal act – as emergency measure under article 122 TFEU (emergency action on energy, time limited) but imposing such peg on a private entity index can be legally challenging. **Engagement with FISMA and ENER A3 required to explore legal feasibility.***