NEW STREAM RENEWABLES

PPA AND GREEN GAS MARKETS SUMMER INSIGHT

SUMMER 2024

28 August 2024



Electricity Import Agreements

For those with supply contracts coming up for renewal in 2025, please see the non-commodity charges table below:

New Stream Renewables Cost Breakdown

The chart shows indicative portfolio average prices based upon New Stream Renewables' internal models. DUoS and TNUoS can vary significantly and are very site specific.

	Charge (£/MWh)	2024/25	2025/26	2024%	202 5%
Energy	Energy wholesale cost £/MWh	92.00	83.00	42.94	37.95
Losses	Distribution Losses (average 8%)	10.57	10.08		
	Transmission Losses (average 1.4%)	1.85	1.76	5.80	5.41
Distribution /Transmission	Distribution Use of System DUoS	24.75	30.92		
	Transmission Use of System TNUoS	9.54	10.02		
	Balancing Use of System BSUoS	16.62	18.47	23.76	27.16
Levy control framework charges	Renewables Obligation RO	34.48	37.00		
	Feed in Tariff FIT	8.72	9.20		
	Contract for Difference CFD	2.09	2.70	21.14	22.36
Other	Capacity Market CM	5.35	7.29		
	Climate Change Levy CCL	7.75	7.75		
	Elexon	0.08	0.08		
	AAHEDC	0.45	0.44	6.36	7.11
Total		214.25	218.71		

PPA and Green Gas Markets Stronger on Geo-Political Risks

- European gas prices have hit year-todate highs in early August, with growing supply concerns offsetting comfortable storage levels in Europe.
- Gas continues to support power and PPA pricing but has so far lagged the move.
- Supply risks pushed prices to the highest since December earlier in August.
- This price signal helped divert more liquefied natural gas to Europe.
- Weak industrial demand and comfortable gas inventories have helped to ease some market jitters.

Right now, we are just trying to weigh supply risks on the gas side with relatively healthy storage and continued weak demand outlook."



gas provider."

Front End Gas Pricing

- Dutch front-month futures, Europe's gas benchmark, were quoted at €39.70 pe megawatt-hour.
- The September NBP gas contract in the UK traded around 90p to 95p per therm.

"We have found some short-term price support as we move through summer. I don't need to go into any detail on geopolitics as we all know that two wars are playing out in locations that are key for global energy supplies.



Charles Ward Head of Renewables

"Gas storage looks comfortable, although inventories are slightly lower than last year. Norwegian pipeline flows have dipped a bit with some unplanned outages at the Gullfaks field, just before the usual period

of planned maintenance, which will reduce flows further from that sector. Remember, they are Europe's biggest

"On the Russian side, gas transit through pipelines crossing Ukraine looked normal this week (Monday 19th August), even with everything going on in the Kursk region with an ongoing military incursion into the Russian territory near a key gas transit point."

Opportunity for PPA Generators and Green Gas Producers?

"It's been a great summer for our PPA clients waiting for a good opportunity to fix contracts."

I know it's been a relief for some clients patiently waiting for market strength to sell into. With pricing continuing to find some support for those generators looking for budget certainty and downside price protection, we still advocate looking at forward PPA fixes.

We appreciate that some will still want to take the price risk on and wait further, but for others, a fixing strategy will better suit business and risk management approach and any debt financing constraints."



Jamie Banks PPA Manager at New Stream

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- 1. Supply and demand fundamentals look well balanced.
- 2. Have geopolitical risks already been fully priced?
- 3. Forward markets still hold some risk premium above the spot.
- 4. Opportunities for PPA and Green Gas fixing further out along the price curve.
- 5. 2025 and 2026 above spot markets.



"We have been closely monitoring Russian pipeline flow data after Ukraine seized the Sudzha gas transit station in the Kursk region.

This became a key point for European transit gas after the Sokhranivka entry point for Russian gas transit via Ukraine was closed; Gazprom had to divert all the gas to the Sudzha entry point.



This all happened in the second week of August, and gas prices in Europe hit their highest level for the year."

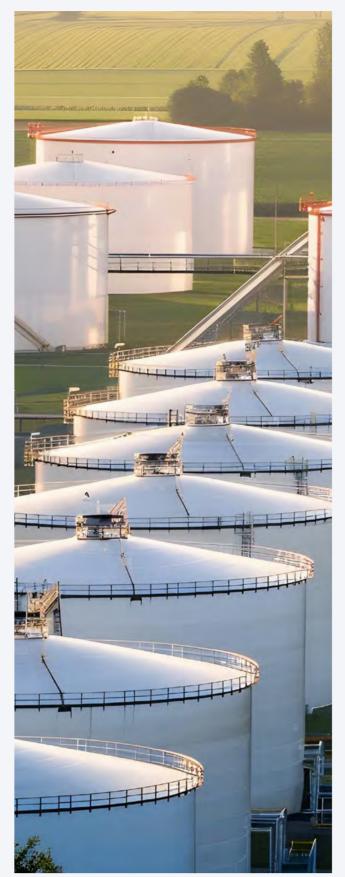
Francesca Reay Energy Analyst at New Stream



Green Gas Prices Surge as Ukraine Seizes Key Russian Route to Europe

- Europe "remains the largest customer of Russian gas," warned a cross-party alliance of members of the European Parliament (MEPs) back in March.
- MEPs had been urging for a ban on all Russian energy commodities.
- The situation observed at the time remains unchanged today.
- Long-term contracts and landlocked countries dependent on pipelines to the East.
- There are also no general restrictions on LNG cargoes (please see our commentary on Russian LNG).

- Ukrainian forces took control of the last remaining transit hub for Russian gas entering Europe.
- Prices rose for at least three consecutive days after the Ukrainian action.
- Despite military action and border clashes, both Ukraine's gas transit operator and Russia's Gazprom said that gas flows would continue through Ukraine.



European Gas Storage

- Slower EU storage build forces Dutch TTF gas • price revision.
- Strong Asian LNG demand has ensured that JKM • (benchmark Asian pricing index) has traded at a healthy premium to TTF for much of 2024.
- July LNG import volumes are down 25% YoY.
- This is the lowest monthly volume since the Russia / Ukraine war started.
- Due to these lower LNG flows, overall gas import volumes into the EU are down more than 7% year on year.

"European gas prices have hit year-to-date highs in early August, with growing supply concerns offsetting comfortable storage levels in Europe. EU storage is more than 87% full, above the 5-year average of 78%.

However, with what we have seen in the LNG market, those lower imports mean storage builds are slower year-on-year.

That's got a few eyebrows raised."



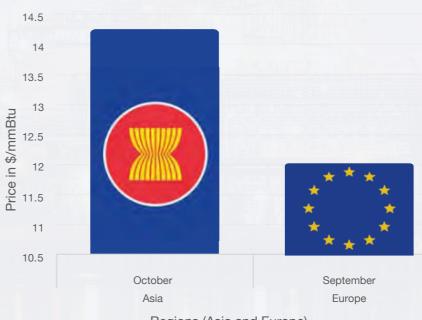
Francesca Reay **Energy Analyst** at New Stream

Heat Drives Asian LNG Spot Price

- Asian spot liquefied natural gas (LNG) prices rose to their highest in over eight months.
- Warmer temperatures across the region have been boosting power demand for cooling purposes.
- The continued hot weather forecast is for much of Asia. Peak power demand in South Korea early in August nearly topped a record in late July.
- Asia is expected to be the dominant driver in global gas demand growth this year.

- We expect this trend to continue in the region transition towards cleaner fuels.
- EU Gas and Power demand is • still struggling.
- year is down nearly 4%.
- There needs to be more signs of industrial and commercial demand returning.

LNG Price Comparison: Asia vs. Europe



Regions (Asia and Europe)

The average LNG price for October delivery into Asia was \$14.25 per million British thermal units (mmBtu).

In Europe, the North West Europe LNG Index, which is the price benchmark for cargoes delivered in September, was at \$12 /mmBtu.



in the years ahead as economies

Demand in the first half of the





Have green gas prices run out of momentum after recent moves higher?

- Natural gas prices at the NBP and Dutch TTF • markets struggle to move higher after the July and early August rally.
- Are geo-political risks now primarily priced in? .
- Will headline-driven moves continue?
- Has recent high pricing attracted LNG diversions to UK import terminals?
- Will gas storage inventories start to weigh • down on a well-supplied market?

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Current Market Fundamentals

- NBP gas is still the key driver of UK power and PPA pricing.
- Geopolitical Risk on the supply side.
- LNG markets in Asia are suddenly becoming essential for the European energy complex.
- Comfortable Gas Storage position.
- Strong Norwegian pipeline flows despite the summer maintenance season.
- Weak demand outlook.
- Renewable (wind) performance key is setting "spot and "system pricing".
- Continued strong renewable output.



Novatek Set to Dock Second LNG Unit at Sanctioned Arctic Plant

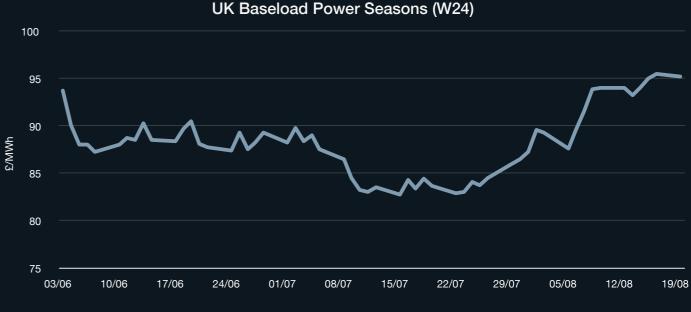
- Despite Western energy sanctions, Russian gas producer Novatek is pushing ahead with an expansion project at its Arctic LNG 2 plant.
- Arctic LNG 2 is part of Russia's expansion strategy in liquefied natural gas.
- Novatek has delivered a new structure to expand the capacity of the facility.
- Delivery took place from the company's engineering facility in Murmansk to the site of the Arctic LNG 2 project on the Gydan peninsula.
- The US sanctioned the facility last year, aiming to cut the energy revenues to the Kremlin.

UK System Power Pricing Remains Weak

Within Day Power Pricing



A fixing opportunity for PPAs?





New Stream Market Report_Summer 2024

US Adds Most Power Generation in 21 Years as Al **Demand Surges**

- Capacity increased by most since 2003 in the first half of 2024.
- Solar power leads to planned additions that are seen to double by year-end.
- Electricity generation rose by 20.2 • gigawatts between January and June.

"It will be interesting to see if the surge in power demand from Data Centers and drive toward electrification will increase demand in the UK as quickly as we have seen in the US markets."



Charlie Ward



If you would like to receive our weekly Whatsapp PPA / GPA price broadcast.



Carbon Markets

- Labour is exploring how to realign the UK's carbon regime with the EU.
- British exporters have warned that they could end up paying hundreds of millions of pounds extra in the future because the UK's carbon price is currently lower than the EU's under their respective ETS schemes.

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• This is designed to prevent UK or EU-based manufacturers from being undercut by global rivals.

53 51 49 47 45 43 41 39 37 35 03/06 24/06 01/07 08/07 15/07 10/06 17/06 22/07 29/07

UKA Carbon



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1111111111111 Good morning. Please see updated gas chart as of this morning. Front end pricing is starting the week lower with the April contract down around 3%. Drivers : strong pipeline supply, low demand forecast and improved renewables forecast. PPA pricing is lower relative the gas move. Thanks

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Despite issues at the huge Nyhamma gas processing facility in Norway NBP pricing has moved lower again this

This has put further pressure downward pressure on PPA market pricing.

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