SM85 | 9.3.2022
Winter is Coming | Episode 1
Samantha Dart, Head of Natural Gas Research, Goldman Sachs

We kick off our new series, Winter is Coming, with Samantha Dart, Head of Natural Gas Research at Goldman Sachs. SmarterMarkets™ host David Greely sits down with Samantha to discuss the outlook for natural gas and LNG this winter in the face of all that has happened – and is happening – in Europe.

Samantha Dart (01s):
Can Europe withstand a cold winter without rolling blackouts? That's what we were solving for. That's where our price forecasts were coming from and we think Europe can do it. When we get asked, well, are we going to need to see rationing in Europe to get through it? It's not in our base case. It's not something we see as necessary under average temperatures. The risk is the balance is the result of a lot of moving parts. Right now, for example, LNG imports play a massive role in helping storage go where it needs to go. So if LNG starts to disappoint, that puts the burden of adjustment much more so on demand destruction. And if that demand elasticity isn't there, then you're in trouble and that's when rationing becomes more of a risk.

Announcer (50s):
Welcome to Smarter Markets, a weekly podcast, featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions are we facing a crisis of information or a crisis of trust and will building Smarter Markets be the antidote?

David Greely (01m 15s):
Welcome to Winter is Coming on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Samantha Dart, Head of Natural Gas Research at Goldman Sachs. Sam will lead off our series, discussing the outlook for natural gas and LNG this winter and beyond in the face of all that has happened and is happening in Europe. Hello, Sam, welcome to Smarter Markets.

Samantha Dart (01m 39s):
Yeah. Hey David, it's great to have it.

David Greely (01m 42s):
Well, it's so great to have you here to talk with today because you know, there's so much to discuss and honestly, I don't know where to begin. What are the words to describe the level of natural gas prices that we have seen in Europe. They've recently backed off, but it's been over €315 per megawatt hour for, you know, those of us, not in Europe, that's over $90 in, MMBTU, right. So the US is around 9, so 10 times what we're paying in the US and you know, the equivalent basis to a barrel of oil, that's like, well over $500 a barrel. I mean, it's really astonishing. I've never seen anything like it and you know, it has potentially devastating consequences for people in Europe and around the world over the course of the coming winter. So I was hoping, you know, you could kick us off by helping us understand, you know, the severity of the shortfall of natural gas in Europe, that's helping to drive these prices and like, is this simply the decline in Russian supplies following the invasion of Ukraine or what else is going on?

Samantha Dart (02m 48s):
Yeah. So, you know, it's interesting to remember that the, the drop in Russian supplies to the region, it started before the war, it started in late fall last year and at the time it felt like something transient that maybe if Nord Stream 2 was approved, they would, you know, bring back volumes, but of course, once the war started, Nord Stream 2 moved off the table and those cuts became really permanent and at that time for gas prom it made a lot of sense, even just economically, because the cuts that they had in volume were way compensated for the increasing prices, right. So economically made sense, politically, it made sense for them and things just got worse and worse supply wise after that and it matters because I mean, for those who don't follow natural gas markets closely, right. I mean, this is a fuel primarily used for heating in the winter, in the Northern hemisphere.

Samantha Dart (03m 55s):
So even though we are still in summer, the whole market is focused on building enough storage so that you have enough to draw down from, in winter when demand is incredibly high. So that's what keeps prices high, not just during winter times, but right now, in fact, I would expect the highest point in prices to be right now in summer, when you need to get the job done, you need to build storage and you have a massive hole in your balance. You have the amount, just to give you a sense of order of magnitude here. The amount of supply that we normally see from Russia in Northwest Europe during the winter is the equivalent of nearly 20% of total winter consumption. So it's not something that you can just turn to your neighbor and say, hey, can you send me a little bit more via pipeline?

Samantha Dart (04m 49s):
You don't have that type of spare capacity. In fact, you don't have spare capacity anywhere. That's part of the problem. Also let's go around, right, let's look at the UK, the UK gas production has been in slow decline for years. Norway has been flat. I mean, they're investing, but they're investing to prevent declines Netherlands in declines. Yanai has talked to Algeria about increasing supply, but these are moderate volumes by 2024 and then we turn to LNG it's also not a market that can deliver additional capacity overnight. These are projects that take years to get built. So what you have today is all you got, which is why Europe ends up having to solve the problem by pricing high enough to attract LNG away from everybody else and towards the continent so that it can compliment their balances a little bit.

David Greely (05m 44s):
And that's so amazing that 20% of consumption number like because yeah, if you're think about how much does demand normally change year to year, how much does supply grow year to year. It's a few percent, it's not 20%. That just it's amazing and one thing I love about, you know, from an analyst perspective of looking at the natural gas market is that the margins of adjustment to try to adjust to imbalances are so clear and so visible, like right, you see a gas plant turn off and a coal plant turn on and you can watch all these economic adjustments occur and there are many levers that can be pulled to bring the market into balance. I don't know if there's enough to bring a market 20% back in balance, but I was curious like, what adjustments has the market been using, or what levers has it been pulling to try to balance supply and demand given the shortfall of gas coming in from Russia and what if any adjustments remain that can still be made?

Samantha Dart (06m 44s):
Yeah. So when it comes to natural gas markets, usually your first lever of adjustment will be the substitution between gas and coal and in the case of Europe, this has been playing out since last summer, because even before Russia cut any gas, if you go back to the spring of 2021 it was so incredibly cold in Northwest Europe. That gas started to move above coal back then. So that's where that substitution away from gas and towards coal got started in Europe and then it couldn't stop because after the cold weather in the spring, you had supply disruptions in LNG in the summer followed by then the initial Russian cuts in the fall that we already talked about. So gas has been more expensive than cold since last summer, which means that everybody that could have switched away from gas towards coal, they've already done that.

Samantha Dart (07m 43s):
So when the Russia crisis started and people asked, well, can't you switch to other fields. It's like, dude, we've been doing this for months. It's not anything new and then gas became more expensive than oil. That was the new thing that we saw later in the fall, but oil fire generation was never built to be base load in Europe, right. Those generators, they were built to function for a few hours a day, a couple days at a time, so folks don't usually even have fuel storage on site in size to be able to keep that up.

David Greely (08:21):
It right. These are.

Samantha Dart (08m 21s):
Yeah. So it's.

David Greely (08m 22s):
I was saying these are typically like the backup diesel generators?

Samantha Dart (08m 24s):
Exactly.

David Greely (08m 27s):
Is that right, like emergency power?

Samantha Dart (08m 28s):
Emergency power, that's the right word, right. So you can't work as base load. So you first go into coal, then you go into oil and then when there is nothing left on the generation side, you have to go to industrial demand destruction and that was a price discovery process. We didn't know what the price threshold was, so prices kept going up and up and up and we were able to observe that when TTF the benchmark for European natural gas prices, when that crossed €75 a megawatt hour, that's when we started seeing that response on the industrial demand side and the first guys to respond were the fertilizer producers because of the component of natural gas in their total cost of production.

David Greely (09m 15s):
Right and I'm glad you brought up that the industrial demand destruction occurs first in fertilizer because then people have to think, okay, less fertilizer, less food and so now it's this horrendous trade-off between, do we freeze in the winter or starve in the spring or summer, which is, it is really incredible and you know, I know there's been this big scramble, as you've said to fill up inventories before winter in Europe, even the governments are setting different goals. I think the EU has an 80% full storage goal, Germany, 95% by November, but of course, what matters isn't how much you start the winner with as much as are you gonna have enough to get through the winter and I'm curious how you're thinking about those probabilities that, you know, even if Europe gets to reasonably full and I think it looks like they should correct me if I'm wrong, what are the probabilities that Europe will have enough natural gas and storage to make it through the winter, without exhausting those supplies?

Samantha Dart (10m 15s):
Yeah. So when we put together our price framework, what we did was to solve for certain levels of storage. So for summer, for example, we solved for 90% full for the region. So how high do prices need to go to make sure that there is enough demand destruction. So that storage builds appropriately to get to that 90% figure. Why is that, well because if you start the winter at 90%, it's a lot easier to manage winter than if you start that 80. I know that you target is 80 as you point it out. That's too low. That's just not enough because that, that would just create panic in the winter. You'd be too exposed. So in our framework, and by the way, this was also consistent with the way that the market was pricing you. It didn't look like it was pricing to reach 80, which wasn't much easier target by the way, we're there.

Samantha Dart (11m 10s):
Now we're at 80% of food now, is that enough, it's not, but as you mentioned, yes, I agree that we're on track to get to 90% full and for the end of winter, we solved for 20% full and the reason is 20% full is enough to get you through a one standard deviation colder than average winter event, and still leaves you a bit of a buffer. So can Europe withstand a cold winter without rolling blackouts, that's what we were solving for, that's where our price forecasts were coming from and we think Europe can do it when we get asked, well, are we going to need to see rationing in Europe to get through it. It's not in our base case. It's not something we see as necessary under average temperatures. The risk is for example, the balances, the result of a lot of moving parts, right, right now, for example, LNG imports play a massive role in helping storage go where it needs to go.

Samantha Dart (12m 15s):
So if LNG starts to disappoint, that puts the burden of adjustment, much more so on demand destruction and if that demand elasticity, isn't there, then you're in trouble and that's when rationing becomes more of a risk and I mentioned demand elasticity because this is not just a linear relationship necessarily when prices started to go above that threshold that I mentioned the €75 of megawatt hour, yes, we started to see a lot of response on the industrial side, a lot of demand curtailments, but this summer, that response slow down and it makes sense, right. If you think, okay, low hanging fruit goes first and now we're seeing guys that are hedged or guys that have been able to pass through the higher costs that they've seen on, on the production side to their end users. So you don't see as much of an elasticity as we saw in the beginning of the process. So that's a real risk that we need to consider going forward as we go into the winter, should anything look tighter than what we expect. We need demand to respond to prices and if it doesn't, that's where rationing goes in, but it's not in our base case at the moment.

David Greely (13m 31s):
Right and by rationing, I imagine you mean like government rationing as opposed to high price causing people to cut back, is that right?

Samantha Dart (13m 39s):
Exactly, government driven demand destruction, you know, you turn to your auto producer and say, you know what, you're gonna have to stop for a few weeks because we just don't have the energy for you right now.

David Greely (13m 52s):
All right. So I want to make sure I heard this correctly. So you were saying that given the, the levers that have been pulled and are priced to be pulled probably a one standard deviation colder than normal winter. So a reasonably cold winter, but not an extremely cold winter, you could probably ride out and still be above 20% inventory at the end of the, the winter. Is that right and then if it gets colder than that, we'll need to pull more levers?

Samantha Dart (14m 17s):
So the 20% is the, the level of storage that would be high enough to so for you to draw down through a cold winter. So you would not end at 20%, if you have the colder than average winter, you would end at 20% if you have an average winter.

David Greely (14m 35s):
Oh, okay.

Samantha Dart (14m 42s):
But can that 20% get you through a cold winter and still leave you a buffer yes.

David Greely (14m 44s):
Okay. Yeah. I'd like a bigger buffer. I'm curious, you know, you talked about on, I imagine a lot of the levers will have to remain pulled. So what we should expect to see the coal fired plants going throughout the winter, we should expect diesel fired generators running when they can, where they can and I imagine a cutback on fertilizer production, but the prices we're seeing today are they inducing even higher forms of demand destruction beyond, you know, the fertilizer plans, which I know are often the first places you see a, a real demand pullback from the industrial side?

Samantha Dart (15m 22s):
Yeah. So the, the industrial sector is where you probably see the most response to prices because they bind the wholesale market. They get the impact directly, but residential users will still suffer from it, right, not as directly as industrial consumers, but you have a massive pass through of the cost the UK government just announced that they were raising the cap of energy cost for end users. So energy bills are going to be a lot higher than in the past and yes, this is likely to generate a response as well with heating demand it's not something that we get to test versus prices because again, prices whenever this high to cause a reaction like that, whenever your model hitting demand for natural gas, you can explain pretty much all of it with weather. So this response to price is something that we're gonna discover, especially over the winter months, but we've already observed that in the shoulder months. So since late March, March is not that cold in North Russia compared to North America. So since March, we started to see whether adjusted residential demand, showing up lower than what we would've expected. So you are already seen to some extent that response on the residential demand side as well and this will certainly help through winter.

David Greely (16m 49s):
Yeah and I think much like we're accustomed to when the price of gasoline goes up at the pump and you know, people need to get the gas, they need to get their car need to get to work and then they have to take that spending out of other items. I imagine we'll see that even more so over the course of the winter, because people need to heat their homes. That's the first bill you pay and then after that, you know, it'll have that ripple through effect. I wanted to ask you in terms of kind of the ripple through effects, we've been talking about Europe a lot and you've mentioned the importance of US LNG coming into Europe to help alleviate some of the strain and I saw the other day that I think the US was the leading exporter of LNG this year. So that's quite a change in the market and of course Europe's increasingly connected to both the US and Asian natural gas markets by LNG and those outflows of LNG have helped push us gas prices up to that, you know, $9 in MMBTU and over level. So I wanted to ask you, how do you see the spillover of the supply shortfall in Europe impacting the us and Asian markets this winter.

Samantha Dart (17m 54s):
When it comes to the US I would say that the link shows up a lot more in the medium to long term than near term and the reason is when you look at how much gas the US can send Europe, it's limited by existing refection capacity, right, you can't just go to a port, let me just put this into a regular tanker and send it out. You really have to liquefy that natural gas, put it in a specialized tanker and send it over. So you can only do as much as your refection capacity and you cannot build it overnight. The fastest you can do a decent size train is two and a half years as we've seen in the marketing in recent years. So this is not something that can change in the very near term and because the variable cost of production of LNG is so low.

Samantha Dart (18m 47s):
These guys are already producing and exporting everything that they can. So European gas prices can be at $15 on MMBTU or $35 or $55 or $90 as you pointed out and the US is going to export exactly the same it's in the money to go and it goes, so the near term link on the fundamental side is really not there that visibly, but there is a massive link down the line because global gas prices this high relative to us, LNG costs create a pretty significant incentive for folks to sign additional long-term contracts. Hey, instead of being exposed to this high European gas price, I'm gonna sign a contract with a US facility and pay much lower prices for the next 15, 20 years and this is exactly what we've seen. Global gas prices are so high that the number of long term contracts being signed, and to be fair, not just with us facilities, but with other facilities around the world, contracts keep popping up and popping up and popping up.

Samantha Dart (19m 55s):
That's what these incentives end up generating. So the result of that is that down the line, we're gonna see more of these look, affection facilities, reaching financing, and getting built and showing up. So your natural gas demand in the US over time will grow more and more and more to the point where I would say today, the main driver of natural gas demand growth in the US has become LNG export capacity that's it like. It's no longer generation, it's no longer it's about LNG and when we're thinking about how to think about prices, be it in the near term or longer term. What we have in the back of our minds is always okay, how much production is gonna be growing versus LNG growing export capacity. Those two are gonna set your price.

David Greely (20m 46s):
That's such a, a hugely important statement and I love the way you said it, that I'm gonna get it wrong but you said the, the main source of demand growth in the United States is gonna be LNG and it's just because like recently in the news with the Freeport LNG facility, I think is a great example of when people believe it's gonna come back online and more LNG can be shipped out. You see the US gas price go up, because it is gonna be less in the US and then when it's, oh no, it's gonna be shut longer the price goes down and I think psychologically the US isn't used to living in a global gas market and you know, we've had a whole lot of gas coming out of the Shell revolution for years and people have gotten used to like low natural gas prices and I'm sure there's feelings of solidarity with the people in Europe, but to be honest, I think the US consumers would be in shock to realize that, you know, if we had to compete and there were unlimited facilities to move us gas to Europe, we might not be pricing 90, but we'd be pricing well above nine?

Samantha Dart (21m 48s):
Well, but, but that's not necessarily the case, right, because again, it goes back to how much LNG export capacity grows in the US relative to production. You can add another 12 BCF of export capacity, which is what we expect to see before the end of the decade out of the us. But if you grow US net gas production by 13, you're fine, right. So it's not just one side and we do get asked that a lot is the US just going to price as a net back to the rest of the world and I think the answer is no, not in a sustainable basis because the US has a functioning supply curve. It has the resource to develop. Whereas Europe really doesn't. Europe is vulnerable to whatever global LNG supply is doing. Even right now when we look at the crisis that the region is going through and we look ahead to 2023, the picture doesn't change very much in 24.

Samantha Dart (22m 48s):
It doesn't change very much. It does change from 2025 in our view because there is a lot of new leak, affection capacity globally coming on. So it's gonna be easier for Europe to feel storage without having to destroy industrial demand. So for Europe, they are vulnerable to whatever is happening in global LNG supplies. When it's a new wave of facilities coming on, they can start a new bearish cycle and when that waves is ended, they start a bullish cycle. The US is different. It has a supply curve. It can develop resources. The question is at what cost and it's, it's a relevant question, right, because if we go back to the days of 2018, 20 9 Appalachia used to be the single biggest contributor of US natural gas production growth and Appalachia is bottleneck. So that is over, so you need to go to the next best guide. You go to the next lowest marginal cost of production at the moment. That would be core Haynesville. But if you, again, look ahead and think of, oh, we're gonna get another 12 BCF a day of LNG export capacity can core Haynesville deliver that probably

not. So you're gonna have to go a little bit higher along that supply curve, but you have one, you have resources to develop. So I don't think it's necessarily the case that the US will be sustainably pricing as a net back to the rest of the world.

David Greely (24m 23s):
I really wanna come back to the point about the investment, both in the US and Europe, because it is so important, but before we do, I just wanted to ask you where does Asia fit into all this, because I feel like it wasn't very long ago, Asia was the big source for LNG demand and also a pretty sizeable source of supply and now it's an afterthought. What is going on?

Samantha Dart (24m 45s):
So Asia in a normal year, right, before this European crisis, Asia would routinely represent 70% plus of global energy consumption, so because it only produces about a third of global LNG supplies, Asia would always price at a premium to Europe to make sure that they attracted enough LNG cargos away from the Atlantic basin towards the Pacific and problem solved, right. That was the normal and this year it's different because Europe can't afford to lose those cargos, in fact, Europe needs to make sure it gets more than what the Atlantic basin can supply. So Europe's starting to price above Asia prices and this turned things around and instead of Asia demand, just growing as a plan to do it had to drop you see the way to solve this is you see places like Pakistan and Bangladesh having to go through rolling blackouts because they can't afford spot LNG prices.

Samantha Dart (25m 54s):
So you shrink the market, part of it is absolutely price driven, part of it is because Europe got a little bit lucky that China wasn't active in the market this year because China can afford it. It's almost every year. These days that we see the Chinese government instructing their companies, make sure you have enough commodity supplies for the winter at whatever cost they even use this exact expression. So we know China can afford it, but because of the rolling COVID lockdowns they had over the spring, this really slowed down their economic growth this year and industrial activity is the main driver of natural gas growth in China. It's not generation industrial demand for gas is nearly double what generation is over there and it's what drives growth. So if China economic growth is sluggish, that impacts their LNG demand directly. So because they are not active in the LNG market, this has left a lot of LNG available for Europe. So Europe got a bit lucky there and there is nothing guaranteeing that this will be the case next year.

David Greely (27m 06s):
Yeah and I'm curious, when do you anticipate the Chinese becoming active again because that could be a really big impact, right. If you're trying to wrestle LNG away from China, when they're saying pay any price, do you expect them to be back in the market this winter or do you think Europe has the gas from the market this winter?

Samantha Dart (27m 25s):
Yeah, we have been assuming that Chinese demand for LNG would be back up year and year by this fall. But the drought situation more recently in the Sichuan region changed all that. The electricity of the ability is solo in the region because they rely a lot on hydro that they're having to shut down industrial activity again. So what we see in the high frequency data is that the amount of LNG China is bringing in remains exceptionally low, well below last year's levels and we recently downgraded our expected Chinese LNG imports through the fall. So we raised our European LNG import expectations on the back of that for the fall a little bit.

David Greely (28m 09s):
Okay. Yeah and I just wanted to come back for a moment to, you know, when you were saying there were rolling blackouts, I believe in Bangladesh and one other country, because earlier we were talking about, oh, Europe may get lucky and won't require government rationing this winter, which would be things like rolling blackouts and telling car manufacturers to shut down for a while and things like that. But because of the interconnected global gas market, you are seeing it in some of the poorer countries and I think that's what always happens, right. When you get in these energy wrestling matches when there's just not enough to go around, the rich will make sure they get the supply they need like China is and the poor, you know, the market gets balanced on the backs of the poor at some point?

Samantha Dart (28m 53s):
That's exactly right.

David Greely (28m 55s):
And I guess the way to get around that is investment which brings us back to the point I wanted to follow up with you earlier, because yeah, I mean, absolutely agree. The US is in a really fortunate position that to some extent we can be have some control of our own gas supply destiny. We, we have the resources, we have the ability to develop, but you know, when I look at Europe and there's been, you know, of course this scramble to get enough natural gas and inventory for the winter, that seems like they've gotten inventories into a good place and then government policy makers have been encouraging and sometimes even demanding more production bringing back cold fired plants, expediting LNG facilities, expediting LNG import facilities to help bring more gas into Europe as well. However, at the same time, many of these policy makers are also seemingly saying that this is only a temporary reprieve for the industry.

David Greely (29m 50s):
Like we want all this energy, you know, we need the gas, we need the coal, we need all the things we were railing against a year ago and you can do it this year, but you know, this is all gonna go away because we need to get back to focusing on the transition to a low carbon system and firmly believe we need to transition to a lower carbon system. We need to do it intelligently and we need to transition effectively. So we don't have people, you know, not able to heat their homes in the winter. But I'm curious from an investment perspective, how are we gonna get people to make these multi-year investments that are needed to increase production, to build LNG tankers to build facilities investments that typically require 5, 10, 15 years or more to pay for themselves and to generate a reasonable return. How do you do that if the suspicion is that government policy makers are gonna shut you down the moment the crisis seems to have passed?

Samantha Dart (30m 48s):
You know what illustrates this point really well is that even after all that's happened in Europe so far, and it's not over yet, if you talk to European governments or European, industrial, natural gas buyers and ask them, do you want to sign a long term contract for LNG with the US, they will hesitate. Well, I don't know. We have the energy transition ahead of us. I don't know that I can commit to 15 to 20 years of gas buying. Can they offer a cheap contract for six years, that would be great. This is what we hear from them. I'm not even kidding. They won a contract for six years. That's not going to be enough to help finance to your point a newly affection facility, not in the US, not anywhere in the world. So you can't solve the problem without investment. That is, it just doesn't happen.

Samantha Dart (31m 43s):
And since the war, if we rank, okay, where the long term LNG contract sign, since the war are, where are they going to, who are the buyers. Europe is a distant third. I mean China, not just China, but Asia is a whole it's number one portfolio players or number two and European buyers distant third. So even with everything that we've seen, you know, without the investment, you are just not going to get the solution. But because these other players are seeing that Europe is going to demand more gas weather contracted or on a spot basis, they're also acting and signing those contracts for themselves because as you pointed out earlier, Asia was always the main source of demand growth. When it comes to natural gas, we think about coal to gas substitution and this has played out in a big way in the, the us over the years in Europe, but in Asia, it's very incipient. It still has ways to go. So they know their natural gas demand is gonna keep growing and Asian buyers have continued to be very active in signing those contracts. Because of that, we think that, yes, we're going to see additional look affect facilities built in the US, but Europe frankly, should be a lot more active as a part of that and yet they still hesitate on whether they want to commit to natural gas for this long period of time or not.

David Greely (33m 15s):
Yeah and I was wondering, like you mentioned earlier, you know that there won't be enough LNG facilities coming on to really alleviate the European situation for a few years because it just takes time to build these things and I'm curious, you know, given that, given some of these impediments to investment, does this mean that like this crisis is gonna continue well beyond this winter?

Samantha Dart (33m 38s):
Yeah.

David Greely (33m 41s):
Oh it's amazing and you know, this market really well and so I'm curious as all of us are kind of going through the fall, going through the winter, trying to see whether we're gonna skate by and get lucky or, you know, whether this could turn really bad, what are you watching and what should we all be paying attention to this winter to help us understand if the situation's getting better or getting worse?

Samantha Dart (34m 14s):
So I would say beyond Russian volumes and weather, right, which are the two obvious ones, I would say storage is the tell all it's the summary of everything happening in the market. And we're fortunate to have access to high frequency data on European storage. Everybody can see that it's publicly available and that will tell you if storage is at the moment, building at the pace that it needs to and it has been building above average and during the winter, how quickly it'll be drawing relative to average, right. So that's the number one driver that I would say needs to be watched. The second one I would mention then, you know, not everybody will have access to that data, but LNG flows are incredibly important. Like I mentioned before, the LNG flows we've seen going into Northwest Europe this summer have been at historic highs and it's made such a big difference in keeping storage, building at the appropriate pace that any disappointment in that can be very impactful. Like I said before, if you don't have the LNG, the burden of the adjustment falls back on demand destruction, which can be a lot more painful. So I would watch demand of LNG around Asia very closely and how much is left going into north Europe very closely.

David Greely (35m 45s):
All right, well thanks very much, Sam really appreciate you coming in. It's been great to catch up with you. It's gonna be a really tough environment and I hope we'll be able to talk with you again to see how we all get through this winter.

Samantha Dart (35m 57s):
Thanks for having me. Yeah. It's a challenging time.

David Greely (36m 01s:
Thanks again to Samantha dart, Head of Natural Gas Research at Goldman Sachs. We hope you enjoyed the episode. Please join us next week when our guests will be Daniel Yergin, Vice Chairman of S&P Global, and the Pulitzer prize winning author of the Prize and the Quest, we hope you'll join us.

Announcer (36m 17s):
This episode has been brought to you in part by Base Carbon. The trading of carbon credits can help companies and the world meet ambitious goals for reducing greenhouse gas emissions. But how do we judge the quality of these projects and how can we ensure that our investments are creating real value. At Base Carbon, we're focused on financing and facilitating the transition to net zero through trusted and transparent partners. It's time to focus on what's important. It's time to get serious on carbon, learn more at basecarbon.com.

Announcer (36m 53s):
That concludes this week's episode of Smarter Markets by Abaxx. For episode transcripts and additional episode information, including research editorial and video content, please visit smartermarkets.media. Smarter Markets is 100% listener driven. So please help more people discover the podcast by leaving a review on Apple Podcast, Spotify, YouTube, or your favorite podcast platform. Smarter Markets is presented for informational and entertainment purposes. Only the information presented on Smarter Markets should not be construed as investment advice always consult a licensed investment professional before making investment decisions. The views and opinions expressed on smarter markets are those of the participants and do not necessarily reflect those of the show's hosts or producer. Smarter Markets, its hosts, guests, employees, and producer Abaxx Technologies shall not be held liable for losses resulting from investment decisions based on informational viewpoints presented on Smarter Markets. Thank you for listening and please join us again next week.