

# Key Largo Wastewater Treatment District Board of Commissioners Meeting Agenda Item Summary

Meeting Date: August 2, 2022

Agenda Item Number: M-1

Action Required:

Yes

Department:

Capital Projects

Sponsor:

Ed Castle

Subject:

**Solar Phases 2 & 3 Materials Cost Escalation.**

Summary of Discussion:

Burke has requested compensation for escalation of costs for 316 stainless steel and trans-Atlantic shipping in the amount of \$173,734.89. WEC has verified the reported escalation and has analyzed the causes for 270 days of delay between receipt of bids and issuance of the Notice to Proceed. WEC has determined that 134 days of the delay was within the District's control, or 49.6% of the total delay. WEC recommends offering Burke additional monetary compensation of \$86,223.98. The District has verified that should the Board choose to adjust the contract price by change order, the change order amount would be eligible for reimbursement under the Stewardship Grant program. +

**Reviewed / Approved**

**Financial Impact**

**Attachments**

Operations: \_\_\_\_\_  
Administration: \_\_\_\_\_  
Finance: \_\_\_\_\_  
District Counsel: \_\_\_\_\_  
District Clerk: \_\_\_\_\_  
Engineering: \_\_\_\_\_

\$ 86,223.98  
**Expense**  
Funding Source:  
Grant(s)  
Budgeted:  
No

1. WEC Recommendation Memo
2. Burke's Request for Compensation.

Approved By: \_\_\_\_\_  
General Manager



Date: 7-28-22



## MEMORANDUM

**To:** KLWTD Board  
**From:** Edward R. Castle, PE  
**Date:** July 27, 2022  
**Re:** Burke Request for Compensation for Cost Escalations

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Burke has requested an increase in the contract's lump sum price as compensation for escalation of stainless steel and shipping costs between bid submission and Burke's mobilization to the site. Burke is requesting an increase of \$173,734.89 in the contract amount for escalation from the bid date of 03/12/20 to their mobilization on 03/09/2021. WEC has independently verified the escalation of costs for 316 stainless steel and the escalation of trans-Atlantic shipping costs using five standard indices for the industry. WEC is in agreement that Burke incurred an additional \$173,734.89 in costs for the project.

The Contract Documents provides for monetary compensation to the Contractor for increases in costs due to delays that are within the control of the District. A total of 9 months of delay occurred, with some District-controlled delay and some Contractor-controlled delay. WEC prepared a timeline of activities during the delay period and assigned responsibility for each delay. This analysis shows that the District caused up to 134 days of delay, mainly for negotiating a reduced scope to match the available grant funds. The analysis shows that Burke caused 136 days of delay, mainly for resolution of the Builder's Risk insurance. Based on the above, 49.6% of the delay period was within the District's control with the remaining 50.4% not within the District's control.

The table below summarizes the escalation of prices compared to Burke's original quotes and estimates for stainless steel and for shipping.

	<b>Burke Pre-bid Quote Amount</b>	<b>Burke's Final Cost</b>
<b>Stainless Steel</b>	\$479,116.29	\$569,598.42
<b>Shipping</b>	\$25,000.00	\$55,000.00
<b>Total</b>	\$450,863.53	\$624,598.42
<b>Change Amount</b>	\$0.00	\$173,734.89

It is WEC's opinion that the portion of the delay that was within the District's control accounts for 49.6% of the 9-month delay. WEC recommends that the District offer Burke an increase in contract price of approximately 49.6% of the total escalation amount in accordance with the conditions of the General Conditions and the Supplementary Conditions. The recommended change amount is \$86,223.98.

<b>Recommended Split for Burke's Escalation Amount</b>	
\$173,734.89	Burke's Claim Amount
\$86,223.98	KLWTD portion
\$87,510.91	Burke portion



**BURKE**  
Energy Solutions

# PRICE INCREASES IN KLWTD PROJECT



**BURKE ENERGY SOLUTION**

**10145 NW 19<sup>th</sup> STREET, DORAL, FL 33172**

**(305) 468-6604**

This document was prepared to show the cost increase of stainless-steel materials and logistics on the KLWTD solar project and explain how and why it happened.

It also supports the price increase resulting from the global economic recovery associated with the global pandemic.

The price in BES bid and contract was presented before the effect of the pandemic were tangible. The increase of cost in the following item is here explained so it can be assessed in a change order for a total of \$173,734.89

## Increase in the cost of Steel

The price pattern of 316 stainless steel is easily explained by its market index.

The official data by AK steel related to March 2020 and to March 2021 is shown below.

According to AK values, 316 stainless steel price explodes in 1 year (which has been approximately the time between the offer date and the steel purchase) from \$0.8323/lb to \$1.2214/lb, meaning an increment of +47%

**AK Steel**  
Stainless Steel Raw Material Surcharges  
For Orders Promised for Shipment  
For Shipments February 28, 2021 through April 3, 2021

Grade	Chrome \$/lb	Nickel \$/lb	Moly \$/lb	Ferro Ti \$/lb	Ferro Cb \$/lb	Mn \$/lb	Copper \$/lb	Iron \$/GT	Natural Gas	CGE	≥4.015" or 3/16mm nom	<4.015" or 3/16mm nom
Current Rate	\$ 1.1750	\$ 8.2633	\$ 11.1360	\$ 4.0400	\$ 18.8000	\$ .6408	\$ 3.6745	\$ .490	\$ 2.7600		Surch	Surch
<small>Rates per pound below will be added to invoice at time of shipment.</small>												
NITRONIC® 19D	\$ 1950	\$ 1052	\$ -	\$ -	\$ -	\$ .0287	\$ -	\$ 1123	\$ -	\$ .0067	\$ 4479	\$ 5151
NITRONIC® 30	\$ 1535	\$ 1654	\$ -	\$ .0001	\$ -	\$ .0487	\$ .0162	\$ 1112	\$ -	\$ .0067	\$ 5018	\$ 5771
18-9LW	\$ 1782	\$ 6389	\$ -	\$ -	\$ -	\$ .0116	\$ .0871	\$ 1039	\$ -	\$ .0067	\$ 1.0264	\$ 1.1804
201 (4.0), 201LN	\$ 1584	\$ 3006	\$ -	\$ -	\$ -	\$ .0373	\$ .0075	\$ 1113	\$ -	\$ .0067	\$ 6218	\$ 7151
201 (5.0)	\$ 1584	\$ 3758	\$ -	\$ -	\$ -	\$ .0361	\$ -	\$ 1105	\$ -	\$ .0067	\$ 6875	\$ 7906
2205	\$ 2203	\$ 4134	\$ 2929	\$ -	\$ -	\$ .0029	\$ -	\$ 1043	\$ -	\$ .0067	\$ 1.0405	\$ 1.1966
301(6.00)	\$ 1703	\$ 4510	\$ -	\$ -	\$ -	\$ .0092	\$ -	\$ 1144	\$ -	\$ .0067	\$ 7516	\$ 8643
301LN (6.00)	\$ 1663	\$ 4510	\$ -	\$ -	\$ -	\$ .0097	\$ .0199	\$ 1136	\$ -	\$ .0067	\$ 7672	\$ 8823
301Cu (6.00)	\$ 1737	\$ 4650	\$ -	\$ -	\$ -	\$ .0100	\$ .0373	\$ 1109	\$ -	\$ .0067	\$ 8046	\$ 9253
301 (6.50)	\$ 1643	\$ 4885	\$ -	\$ -	\$ -	\$ .0100	\$ .0100	\$ 1137	\$ -	\$ .0067	\$ 7932	\$ 9122
301 301Si	\$ 1634	\$ 4810	\$ .0635	\$ -	\$ -	\$ .0057	\$ .0025	\$ 1146	\$ -	\$ .0067	\$ 8374	\$ 9630
301,301L (7.00)	\$ 1683	\$ 5261	\$ -	\$ -	\$ -	\$ .0057	\$ .0100	\$ 1134	\$ -	\$ .0067	\$ 8302	\$ 9547
301 (7.50)	\$ 1713	\$ 5712	\$ -	\$ -	\$ -	\$ .0063	\$ .0100	\$ 1119	\$ -	\$ .0067	\$ 8774	\$ 1.0090
302	\$ 1782	\$ 6013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1125	\$ -	\$ .0067	\$ 8987	\$ 1.0335
304, 304L (8.00)	\$ 1782	\$ 6013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1125	\$ -	\$ .0067	\$ 8987	\$ 1.0335
304, 304L (8.25)	\$ 1782	\$ 6389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1117	\$ -	\$ .0067	\$ 9355	\$ 1.0758
304, 304L (8.50)	\$ 1782	\$ 6389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1117	\$ -	\$ .0067	\$ 9355	\$ 1.0758
304, 304L (9.00)	\$ 1782	\$ 6764	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1109	\$ -	\$ .0067	\$ 9722	\$ 1.1180
304, 304L (9.25)	\$ 1807	\$ 6952	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1102	\$ -	\$ .0067	\$ 9928	\$ 1.1417
304, 304L (9.50)	\$ 1782	\$ 7140	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1102	\$ -	\$ .0067	\$ 1.0091	\$ 1.1605
304LN	\$ 1782	\$ 6389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1117	\$ -	\$ .0067	\$ 9355	\$ 1.0758
305	\$ 1832	\$ 8719	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1061	\$ -	\$ .0067	\$ 1.1679	\$ 1.3431
305 (12.0)	\$ 1856	\$ 9395	\$ -	\$ .0005	\$ -	\$ -	\$ -	\$ 1042	\$ -	\$ .0067	\$ 1.2365	\$ 1.4220
309S	\$ 2178	\$ 9019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1000	\$ -	\$ .0067	\$ 1.2264	\$ 1.4104
310/310S	\$ 2375	\$ 1.4280	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0859	\$ -	\$ .0067	\$ 1.7582	\$ 2.0219
316, 316L, 316LN	\$ 1584	\$ 7516	\$ 1953	\$ -	\$ -	\$ -	\$ -	\$ .1094	\$ -	\$ .0067	\$ 1.2214	\$ 1.4046
316L w/2.75mm Mn	\$ 1609	\$ 7852	\$ 2685	\$ -	\$ -	\$ -	\$ -	\$ .1070	\$ -	\$ .0067	\$ 1.3323	\$ 1.5321

**AK Steel**  
**Stainless Steel Raw Material Surcharges**  
 For Orders Promised for Shipment  
 For Shipments March 1, 2020 to March 28, 2020

Grade	Chrome \$/lb	Nickel \$/lb	Moly \$/lb	Ferro Ti \$/lb	Ferro Cb \$/lb	Mn \$/lb	Copper \$/lb	Iron \$/GT	Natural Gas	CGE	>= .015" or .381mm diam	<.015" or .381mm diam
Current Rate	\$ 1.0100	\$ 5.8714	\$ 10.5075	\$ 3.0000	\$ 17.7250	\$ .4855	\$ 2.6144	\$ .290	\$ 1.8770		Surch	Surch
Rates per pound below will be added to invoice at time of shipment												
NITRONIC® 19D	\$ .1560	\$ .0650	\$ -	\$ -	\$ -	\$ .0167	\$ -	\$ .0481	\$ -	\$ .0139	\$ .2997	\$ .3447
NITRONIC® 30	\$ .1228	\$ .1022	\$ -	\$ -	\$ -	\$ .0285	\$ .0079	\$ .0476	\$ -	\$ .0139	\$ .3229	\$ .3713
18-9LW	\$ .1426	\$ .3949	\$ -	\$ -	\$ -	\$ .0068	\$ .0426	\$ .0445	\$ -	\$ .0139	\$ .6453	\$ .7421
201 (4.0), 201LN	\$ .1267	\$ .1858	\$ -	\$ -	\$ -	\$ .0218	\$ .0037	\$ .0477	\$ -	\$ .0139	\$ .3996	\$ .4595
201 (5.0)	\$ .1267	\$ .2323	\$ -	\$ -	\$ -	\$ .0211	\$ -	\$ .0473	\$ -	\$ .0139	\$ .4413	\$ .5075
2205	\$ .1762	\$ .2555	\$ .2703	\$ -	\$ -	\$ .0017	\$ -	\$ .0447	\$ -	\$ .0139	\$ .7623	\$ .8766
301(6.00)	\$ .1362	\$ .2787	\$ -	\$ -	\$ -	\$ .0054	\$ -	\$ .0490	\$ -	\$ .0139	\$ .4832	\$ .5557
301LN (6.00)	\$ .1331	\$ .2787	\$ -	\$ -	\$ -	\$ .0057	\$ .0097	\$ .0487	\$ -	\$ .0139	\$ .4898	\$ .5633
301Cu (6.00)	\$ .1390	\$ .2880	\$ -	\$ -	\$ -	\$ .0059	\$ .0183	\$ .0475	\$ -	\$ .0139	\$ .5126	\$ .5895
301 (6.50)	\$ .1315	\$ .3020	\$ -	\$ -	\$ -	\$ .0059	\$ .0049	\$ .0487	\$ -	\$ .0139	\$ .5069	\$ .5829
301 301Si	\$ .1307	\$ .2973	\$ .0586	\$ -	\$ -	\$ .0033	\$ .0012	\$ .0491	\$ -	\$ .0139	\$ .5541	\$ .6372
301,301L (7.00)	\$ .1346	\$ .3252	\$ -	\$ -	\$ -	\$ .0033	\$ .0049	\$ .0486	\$ -	\$ .0139	\$ .5305	\$ .6101
301 (7.50)	\$ .1370	\$ .3531	\$ -	\$ -	\$ -	\$ .0037	\$ .0049	\$ .0479	\$ -	\$ .0139	\$ .5605	\$ .6446
302	\$ .1426	\$ .3717	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0482	\$ -	\$ .0139	\$ .5764	\$ .6629
304, 304L (8.00)	\$ .1426	\$ .3717	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0482	\$ -	\$ .0139	\$ .5764	\$ .6629
304, 304L (8.25)	\$ .1426	\$ .3949	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0479	\$ -	\$ .0139	\$ .5993	\$ .6892
304, 304L (8.50)	\$ .1426	\$ .3949	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0479	\$ -	\$ .0139	\$ .5993	\$ .6892
304, 304L (9.00)	\$ .1426	\$ .4181	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0475	\$ -	\$ .0139	\$ .6221	\$ .7154
304, 304L (9.25)	\$ .1445	\$ .4297	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0472	\$ -	\$ .0139	\$ .6353	\$ .7306
304, 304L (9.50)	\$ .1426	\$ .4413	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0472	\$ -	\$ .0139	\$ .6450	\$ .7418
304LN	\$ .1426	\$ .3949	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0479	\$ -	\$ .0139	\$ .5993	\$ .6892
305	\$ .1465	\$ .5389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0455	\$ -	\$ .0139	\$ .7448	\$ .8565
305 (12.0)	\$ .1485	\$ .5807	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0447	\$ -	\$ .0139	\$ .7878	\$ .9060
309S	\$ .1742	\$ .5575	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0429	\$ -	\$ .0139	\$ .8995	\$ .9068
310/310S	\$ .1901	\$ .8827	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0368	\$ -	\$ .0139	\$ 1.1235	\$ 1.2920
316, 316L, 316LN	\$ .1267	\$ .4646	\$ .1802	\$ -	\$ -	\$ -	\$ -	\$ .0469	\$ -	\$ .0139	\$ .8323	\$ .9171
316L w/2.75mm Mn	\$ .1287	\$ .4878	\$ .2477	\$ -	\$ -	\$ -	\$ -	\$ .0459	\$ -	\$ .0139	\$ .9240	\$ 1.0526
316Ti	\$ .1315	\$ .4994	\$ .1802	\$ -	\$ -	\$ -	\$ -	\$ .0458	\$ -	\$ .0139	\$ .9171	\$ 1.0014
317L	\$ .1426	\$ .6039	\$ .2703	\$ -	\$ -	\$ -	\$ -	\$ .0429	\$ -	\$ .0139	\$ 1.0736	\$ 1.2346
321, 321LA	\$ .1346	\$ .4181	\$ -	\$ -	\$ -	\$ -	\$ -	\$ .0480	\$ -	\$ .0139	\$ .6146	\$ .7068
15-5 PH®	\$ .1129	\$ .1858	\$ -	\$ -	\$ .0261	\$ .0010	\$ .0365	\$ .0510	\$ -	\$ .0139	\$ .4272	\$ .4913

The figure below is extracted from quote that was received when pricing the project.

The overall cost increase was guaranteed to be 70% of the raw material cost increase.



Ref. 2019\_1948 Rev.04 Burke Energy Solutions

**IMPORTANT NOTES:**

- This offer must be considered preliminary and not-binding, since it is based on preliminary information and data.
- In particular they remain to be defined:
  - the layout of PV plant;
  - the confirmation of structure design and all the details by american engineer;
  - the effective date of order and the trend of costs for raw materials and shipping;
  - changes in the steel structure to speed up the mounting phases;
  - information on the foundations and thus the design of the base plates of columns (this offer does not include the foundations and their connections to the steel structures);
- According to the definition of all this information, the design of the structures could be subject to modifications that could cause variations in price.
- The final design of the structures is in charge of the Client and its engineer. Therefore the supply must be intended as a mere supply of the individual components.
- Alusistemi makes its own technician available for technical advice on site during the start of the installation of structures. The consultancy will exclusively concern the structures themselves and not the construction site activities, for which Alusistemi has no specific competence. Travel, food and accommodation costs for the technician will be borne by the customer.
- All the prices in EURO.

**IMPORTANT NOTE REGARDING PRICES:**

- The price shown in this offer can be increased or decreased according to the price of raw materials. Alusistemi will make reference to the changes in alloy surcharges shown at the following website considering prices for AISI316 for "Lavorati a Freddo":  
<https://www.cogne.com/en/customer/extra-di-lega/>

A percentage change in prices shown at July 2020, will result in a change of total amount equal to the 70% of percentage change

Example (only for explanation purpose - effective prices to be checked):

- Price of raw material at July 2020 (Source COGNE website):	2,35 €/kg
- Price of raw material at September 2020 (Source COGNE website):	2,20 €/kg
- Percentage change of raw material:	- 6,4 %
- Percentage change for supply:	- 6,4 % x 70% = - 4,5 %
- Revised total amount of supply:	497.114,63 € x (- 4,5 %) = 474.744,47 €

The total increase was therefore 70% of 47% that is 33%

That percentage on our offer results in a change from \$479,116.29 to \$622,851.17, for a difference of \$143,734.89

## Ocean freight rate increases and delays

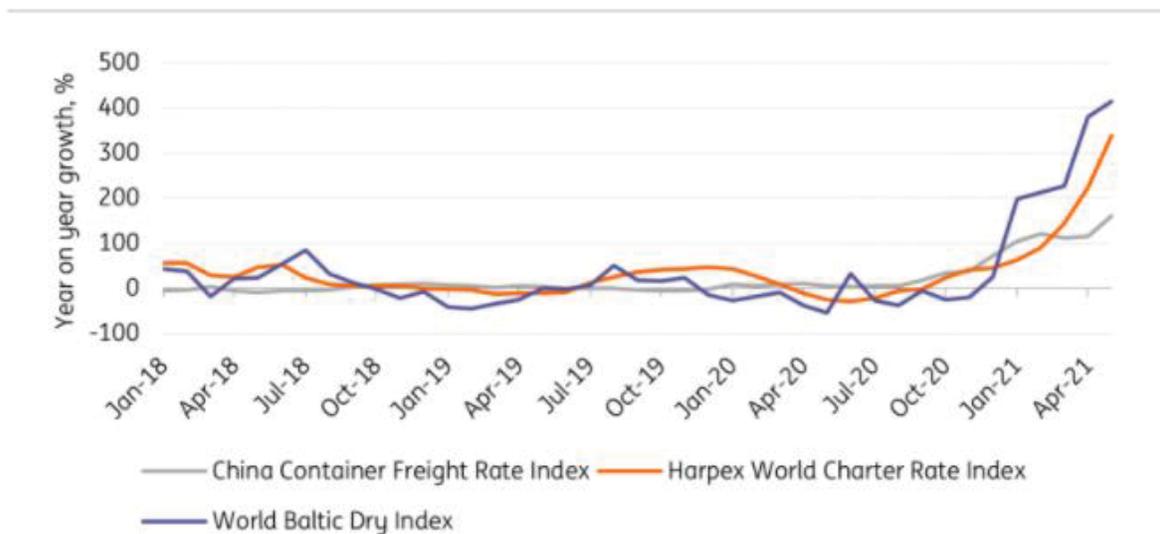
The cost of shipping increased to \$55,000 from our offer value of \$25,000.

Shipping costs have been growing strongly since the autumn of 2020, but the first months of this year have seen a new surge in prices across different freight rates (dry bulk, containers) along major trade routes. Prices for several trade lanes have tripled compared to last year, and charter prices for container vessels have seen similar rises.

While the shipping cost for this project doubled, we managed to stay significantly below the increase of the World Charter Index rate (more than 300%).

### Global shipping costs

Global shipping costs

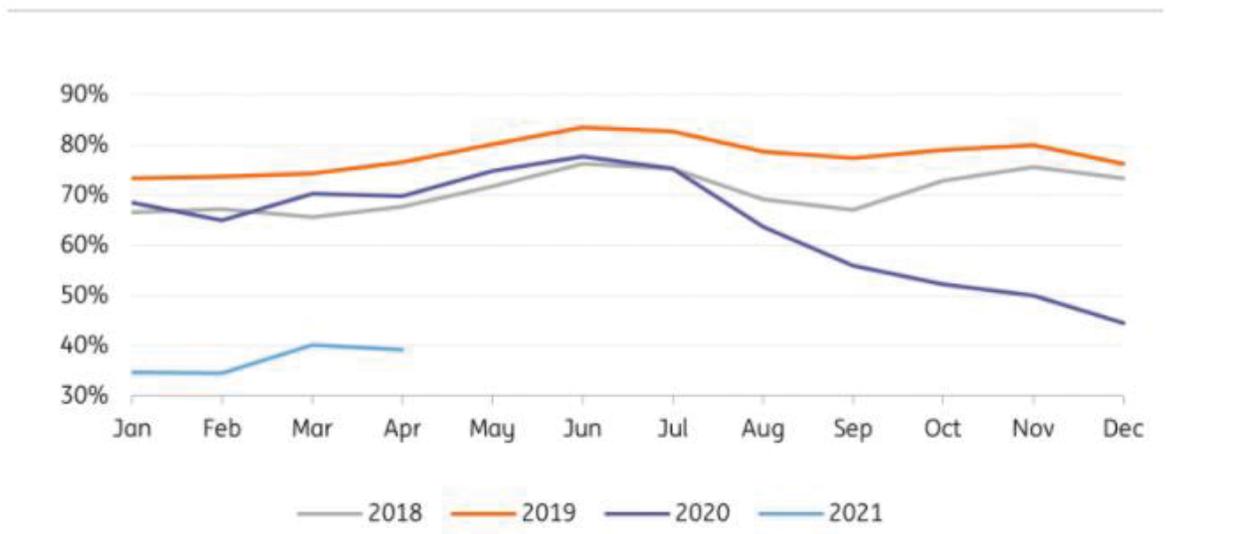


Source: China Ministry of Transport, Harper Petersen & Co. and Baltic Exchange via Macrobond, ING  
Year on year growth in freight rate indices, 2018 - May 2021

As the link between cancelled sailings and delays suggests, congestion is part of the problem. Shipping performance in 2021 has carried on where 2020 left off, in terms of lower rates of vessels keeping to schedule, and average delays for late vessels rising. Overall performance remains the lowest it has been in ten years of records.

The delay on the structure freight was due to the congestion affecting all USA ports, however it did not impact on the general schedule of the project.

### Share of vessels arriving on time



Source: Sea-Intelligence, ING