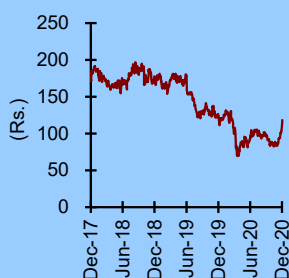


Sector update

Oil & Gas and
PetrochemicalsGAIL (HOLD)
Target price: Rs90

Price chart



INDIA

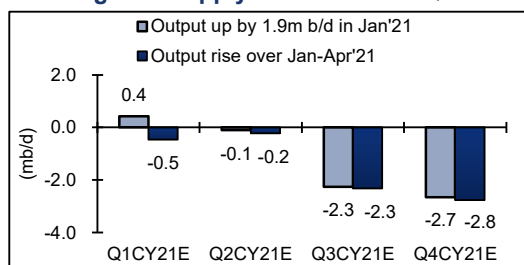
Oil upstream

Vaccine hopes drive oil prices up; OPEC+ also does its part

Brent is up 34% from lows in end-Oct'20 driven by hope that Covid vaccines would lead to demand recovery. The oil price surge is despite second wave of Covid in Europe and US (which has led to demand recovery reversal), and surge in Libyan oil output from 0.1m b/d to 1.25m b/d. Biden administration lifting US sanctions on Iran oil exports is another risk. US oil rig count is up 40% (69) from lows in mid-Aug'20, which together with high oil prices may drive further recovery in US oil output. OPEC+ deciding to raise output from Jan'21 more modestly than earlier agreed is likely to ensure global supply deficit even in Q1CY21E. Thus, OPEC+ has done its part to prevent supply surplus until vaccine boosts demand. This augurs well for oil prices (positive for GAIL) though risks remain.

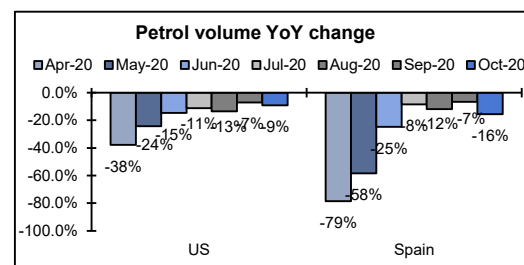
- **Oil up 34% from lows despite multiple headwinds due to Covid vaccines:** Brent is up 34% from US\$36.9/bbl on 30-Oct'20 to US\$49.5/bbl on 4-Dec'20 driven by hope of oil demand recovery due to announcements of multiple high-efficacy vaccines against Covid. The oil price surge is despite: 1) second wave of Covid in Europe and the US, which has led to demand recovery reversal; 2) surge in Libya's oil output from 0.1m b/d in Jul'20 to 1.25m b/d; 3) risk of Biden administration lifting US sanctions on oil exports by Iran, which would boost Iran's output and global supply; and 4) further rise in US oil output as onshore oil rig count is up by 69 (40%) from mid-Aug lows.
- **Demand recovery has reversed in Europe and US due to second Covid wave:** Second wave of Covid in Spain has meant that diesel and gasoline consumption decline was steeper at 13.7-15.6% YoY in Oct'20 vs 7.7-6.6% YoY fall in Sep'20. Gasoline consumption in the US was down 9.3-9.9% YoY in Oct-Nov'20 vs 7.1% YoY fall in Sep'20. US distillate consumption recovery also reversed with fall being 6.7% YoY in Oct'20 vs 2.6% YoY in Sep'20, but fall was just 3.3% YoY in Nov'20.
- **Recovery in oil prices and onshore oil rig count suggest further rise in US oil output:** US oil output was up 841k b/d in Sep'20 at 10.86m b/d from low of 10m b/d in May'20 as per the more reliable EIA monthly data and at 11.1m b/d in the week ended 27-Nov'20 as per the EIA weekly data. US shale output at 7.14m b/d was up 955k b/d in Sep'20 from low of 6.19m b/d in Apr. US shale and total output are still 1.1-2m b/d below peak level respectively. US oil onshore rig count, which is a lead indicator of US oil output, was up by 69 (40%) from low in mid-Aug. The recent oil price surge, even if it does not sustain, would allow producers to hedge at higher prices and boost output.

OPEC+ decision to raise output gradually to ensure global supply deficit even in Q1CY21E



Source: IEA, I-Sec research

Demand recovery reversed in Spain & US in Oct'20 due to Covid second wave



Source: EIA, CLH, I-Sec research

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- **Supply deficit likely even in Q1CY21E as OPEC+ now plans more modest output rise from Jan'21 than earlier agreed:** IEA estimates global oil supply deficit at 2.1-2.8m b/d in Q3-Q4CY20E. However, surplus of 0.4m b/d was likely in Q1CY21E if OPEC+, as agreed in Apr'20, was to prune output cuts from 7.7m b/d to 5.8m b/d from Jan'21. However, we now estimate supply deficit of 0.5m b/d in Q1CY21E and 0.2-2.8m b/d in Q2-Q4CY21E as OPEC+ has decided to raise output by just 0.5m b/d in Jan'21 and by not more than 0.5m b/d in later months and only after deliberations.

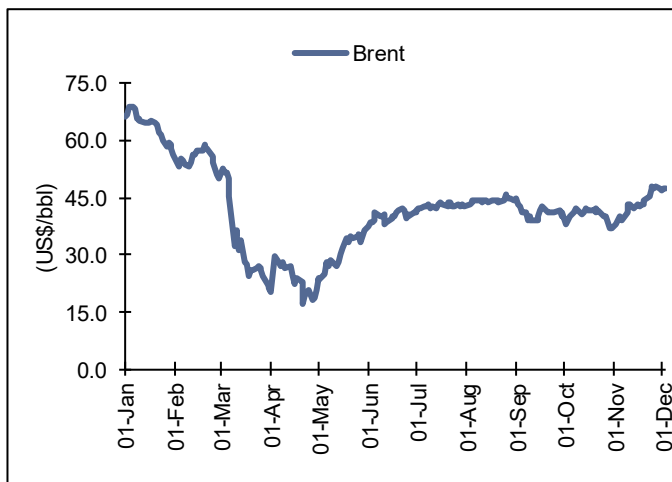
Vaccine hopes & OPEC+ decision drive up oil prices

Oil up due to Covid vaccines despite multiple headwinds

Brent up 34% from recent lows in end-Oct'20

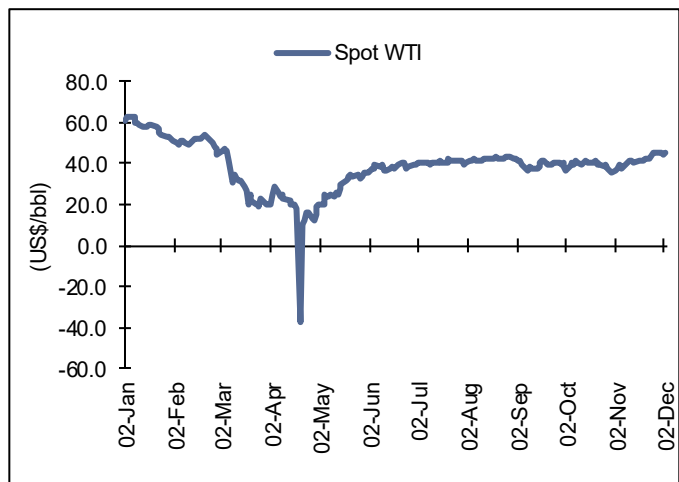
Brent recovered sharply from the lows in Apr'20 to US\$45.6/bbl on 25-Aug'20 driven by recovery in global demand and OPEC+ output cuts from May'20. However, seasonally weak demand in Sep-Oct, second Covid wave in the US and Europe and rise in Libyan oil output led to Brent correcting to a low of US\$39.6/bbl on 30-Oct'20. It is up 34% from that level to US\$49.5/bbl on 4-Dec'20 driven by hope of oil demand recovery due to announcements of multiple high-efficacy vaccines against Covid.

Chart 1: Brent surged to US\$49.5/bbl on 4-Dec'20 from low of US\$39.6/bbl on 30-Oct'20



Source: Bloomberg, I-Sec research

Chart 2: WTI recovered to US\$45.6/bbl on 4-Dec'20 from low of US\$35.8/bbl on 30-Oct'20



Source: Bloomberg, I-Sec research

Oil prices surged despite multiple headwinds

The recent surge in oil prices is despite:

- Second wave of Covid in Europe and the US, which has led to demand recovery reversal
- Surge in Libya's oil output from 0.1mb/d in Jul'20 to 1.25mb/d
- Risk of Biden administration lifting US sanctions on oil exports by Iran, which would boost Iran's output and global supply
- Further rise in US oil output as onshore oil rig count is up by 69 (40%) from mid-Aug lows

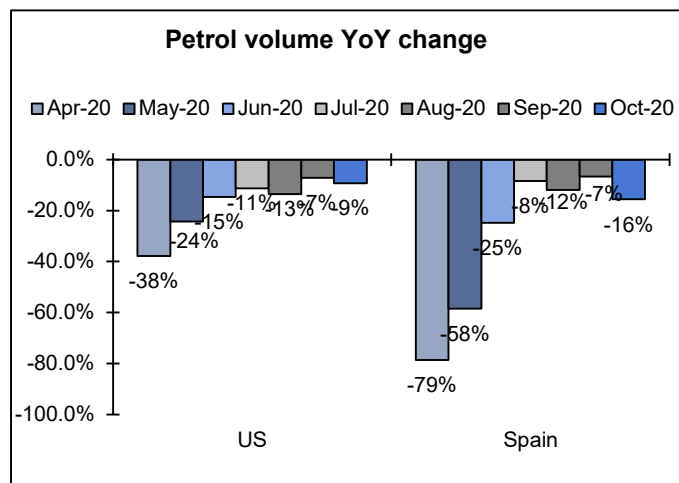
Demand recovery reversal in US & Europe due to second wave

US & Spain petrol consumption fall steeper in Oct'20 than in Sep'20

Petrol consumption in US and Spain had recovered from lows in Apr'20 with fall being the most modest in Sep'20. However, a second wave of Covid in the US and Europe has meant that demand recovery reversed in Oct'20 in Spain and US. Petrol consumption decline was:

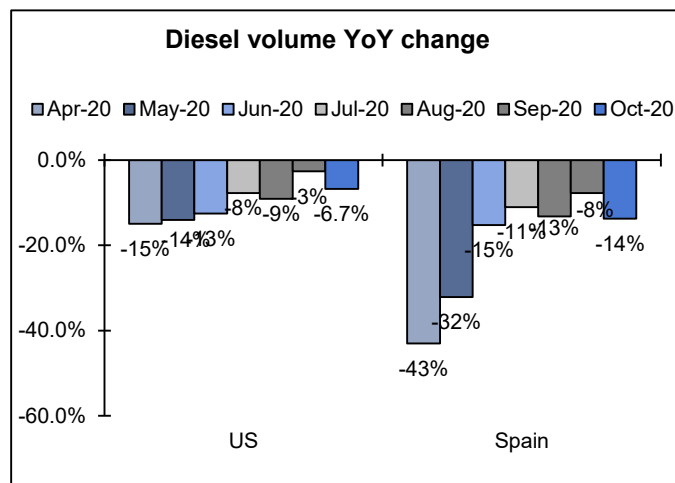
- Steeper at 15.6% YoY in Oct'20 vs 6.6% YoY in Sep'20 in Spain.
- Steeper at 9.3-9.9% YoY in Oct-Nov'20 vs 7.1% YoY in Sep'20 in US.

Chart 3: US and Spain petrol consumption down 9.3-15.6% YoY in Oct'20 vs 7.1-6.6% YoY in Sep'20



Source: EIA, CLH, I-Sec research

Chart 4: Spain and US diesel consumption fall steeper in Oct'20 than in Sep'20



Source: EIA, CLH, I-Sec research

Diesel recovery also reversed in US and Spain in Oct; US better in Nov

Diesel consumption in the US and Spain had recovered from lows in Apr'20 with fall being the most modest in Sep'20. However, demand recovery reversed in Oct'20 in Spain and US due to second wave of Covid. Diesel consumption decline was:

- Steeper at 13.7% YoY in Oct'20 vs 7.7% YoY in Sep'20 in Spain.
- Steeper at 6.7% YoY in Oct'20 vs 2.6% YoY in Sep'20 in the US. However, demand decline at 3.3% YoY in Nov'20 in the US was more modest than in Oct'20, but steeper than in Sep'20.

Libyan oil output up sharply from lows

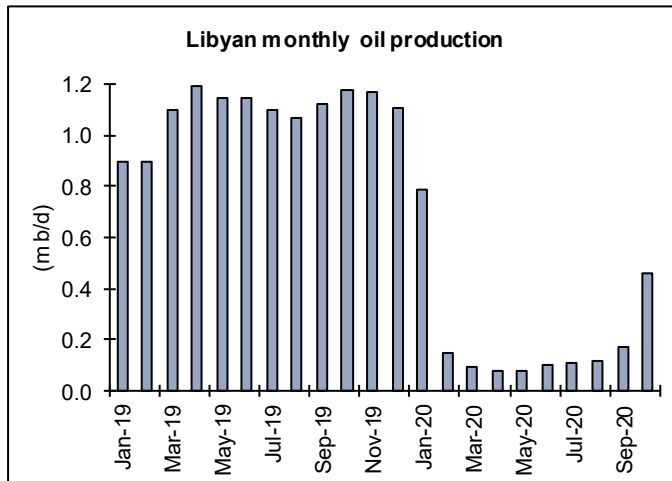
Libyan output up to 1.25m b/d from low of 0.1m b/d in Apr-Jul'20

Libyan oil output, which plunged to a low of 0.1m b/d in Apr-Jul'20, has risen to 0.46m b/d in Oct'20 following ceasefire among warring factions and state-owned oil producer National Oil Company (NOC) lifting force majeure in oilfields one by one. Libyan oil output is believed to be over 1m b/d in Nov'20 and currently. Libya's NOC indicated that its production surged to 1.25m b/d on 18-Nov'20 and guided that it could touch 1.3m b/d in Dec'20.

Libyan oil output likely to be up sharply YoY in CY21E

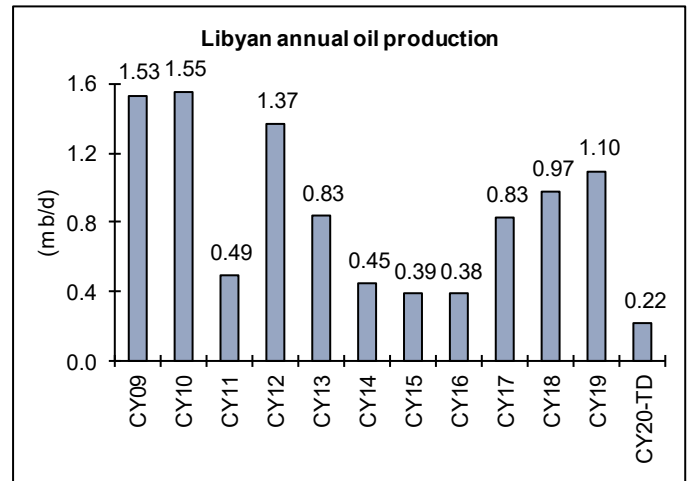
Libyan oil output is just 0.22m b/d in CY20-TD up to Oct'20 and we estimate it at 0.38m b/d in CY21E. It is likely to be up over 3x to 1.2m b/d or higher in CY21E.

Chart 5: Libyan oil output at 0.46m b/d in Oct'20 and 1.25mb/d now, up from 0.1m b/d in Jul'20



Source: Bloomberg, Argus, I-Sec research

Chart 6: CY20-TD Libyan output at 0.22m b/d lower than in other conflict years CY11 & CY14-CY16



Source: Bloomberg, Argus, I-Sec research

Rig count & oil price rebound suggest further rise in US output

US output bottomed out in May'20; down 2.8m b/d from peak

US oil output plunged by 2m b/d MoM to bottom out at 10.02m b/d in May'20 as Covid-driven lockdown led to a plunge in oil demand and prices. US oil production in May'20 was down by 2.84m b/d from peak of 12.86m b/d in Nov'19.

US shale output bottomed out in Apr'20; down 2.1m b/d from peak

US shale output plunged to 6.19m b/d in Apr'20 from 8.25m b/d in Feb'20. Output from Permian basin, which was 4.22m b/d at peak in Feb'20, declined 0.76m b/d over the next two months to bottom out at 3.46m b/d in Apr'20.

US output up 0.8m b/d from lows; shale output up 1m b/d from lows

US oil output in Sep'20 as per EIA's more reliable monthly data is up 841k b/d at 10.86m b/d from low of 10m b/d in May'20. US oil output as per the less reliable weekly data is also at 11.1m b/d in the week ended 27-Nov'20. US shale output is up 955k b/d in Sep'20 at 7.14m b/d from low of 6.19m b/d in Apr'20. US shale and total output are still 1.1-2m b/d below peak level respectively.

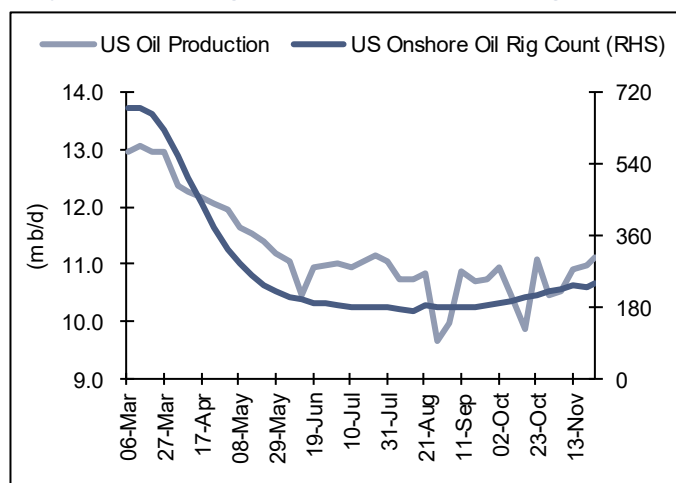
US oil rig count bottomed out in mid-Aug; 75% below level in Mar'20

US onshore oil rig count declined by 75% (511) from 683 in mid-Mar'20 to 172 in mid-Aug'20 as oil prices were too low to support production increases. With oil prices recovering smartly and WTI rising to over US\$40/bbl in Aug'20, US oil rig count started rising again in Aug'20.

Rig count rise by 40% and oil price by 34% to boost US oil output

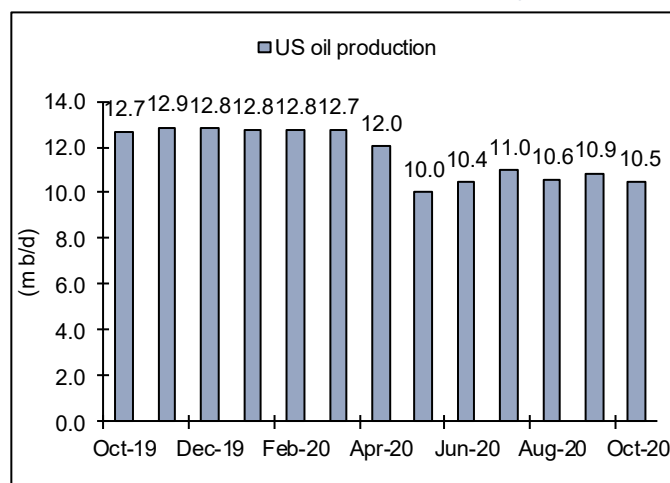
US oil rig count, which is a lead indicator of US oil output, is up 40% from lows in mid-Aug'20 to 241 in the week ended 25-Nov'20. The rise in rig count and recent surge in oil prices, even if it does not sustain, would allow producers to hedge at higher prices and boost output.

Chart 7: US oil output up 0.8m b/d from lows in May'20; US oil rig count up 40% from Aug lows



Source: EIA, Baker Hughes, I-Sec research

Chart 8: US oil production bottomed out in May'20; up 0.8m b/d in Sep'20 from lows in May'20



Source: EIA, I-Sec research

OPEC+ decision to gradually raise output to ensure deficit in Q1

OPEC+ to gradually raise output – and after monthly deliberations

OPEC+ in its meeting on 3-Dec'20 has decided to adjust production by 0.5m b/d from 7.7m b/d to 7.2m b/d (vs 5.8m b/d decided in Apr'20 meeting). Furthermore, OPEC+ has decided to hold monthly meetings starting Jan'21 to assess market conditions and decide on further production adjustments for the following month, with further monthly adjustments being not more than 0.5m b/d. This ensures supply deficit of 0.5m b/d in Q1CY21E (vs surplus of 0.4m b/d estimated earlier) even if OPEC+ raises production by 0.5m b/d every month starting Jan'21. OPEC+ production could thus rise by 1.9m b/d by Apr'21.

Supply deficit likely even in Q1CY21E on modest output rise

IEA estimates global oil supply deficit at 2.1-2.8m b/d in Q3-Q4CY20E. However, surplus of 0.4m b/d was likely in Q1CY21E if OPEC+, as agreed in Apr'20, was to prune output cuts from 7.7m b/d to 5.8m b/d from Jan'21. However, OPEC+ has decided to raise output by just 0.5m b/d in Jan'21 and by not more than 0.5m b/d in later months – and only after deliberations. We now estimate supply deficit of 0.5m b/d in Q1CY21 and 0.2-2.8m b/d in Q2-Q4CY21E given the gradual rise in OPEC+ output.

Table 9: Global oil supply deficit in CY21 estimated at 1.4m b/d vs 0.5-2.6m b/d surplus in CY19-CY20E

m b/d	CY19	CY20E	CY21E
Non-OPEC	65.6	63.0	63.5
OPEC	34.9	30.9	32.1
Global supply	100.6	93.9	95.6
Global demand	100.0	91.3	97.1
Supply surplus/(deficit)	0.5	2.6	(1.4)
YoY change			
Non-OPEC		(2.7)	0.5
OPEC		(4.0)	1.3
Global supply		(6.7)	1.7
Global demand		(8.8)	5.8

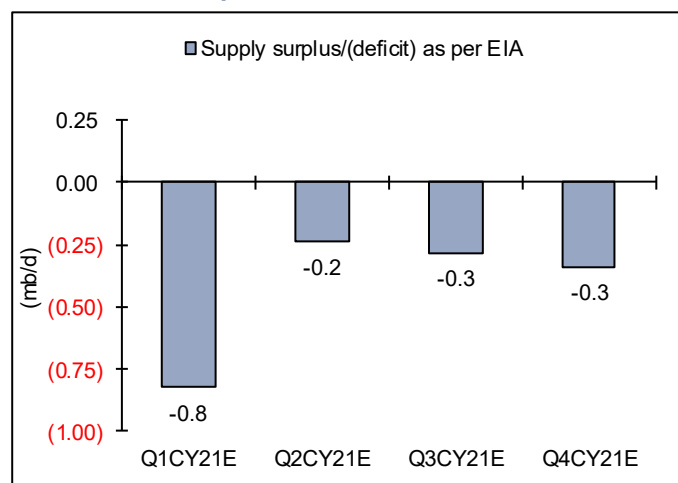
Source: IEA, I-Sec research

Supply deficit of 0.2-2.8m b/d in Q1-Q4CY21E as per IEA

Based on IEA demand and non-OPEC output estimates, we estimate global supply deficit in the four quarters of CY21E as follows:

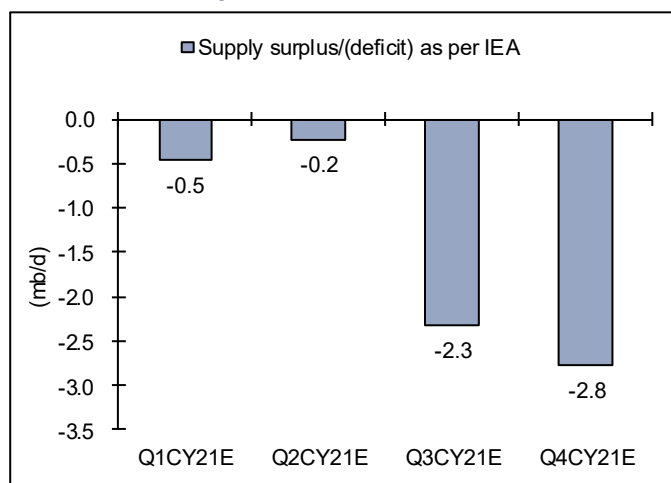
- 0.5m b/d in Q1CY21E.
- 0.2m b/d in Q2CY21E.
- 2.3m b/d in Q3CY21E.
- 2.8m b/d in Q4CY21E.

Chart 10: Global oil supply deficit at 0.2-0.8m b/d in Q1-Q4CY21E as per EIA



Source: EIA, I-Sec research

Chart 11: Global oil supply deficit at 0.2-2.8m b/d in Q1-Q4CY21E as per IEA



Source: IEA, I-Sec research

Supply deficit of 0.2-0.8m b/d in Q1-Q4CY21E as per EIA

EIA estimates global demand-supply balance in the four quarters of CY21E as follows:

- Deficit of 0.8m b/d in Q1CY21E
- Deficit of 0.2m b/d in Q2CY21E
- Deficit of 0.3m b/d in Q3CY21E
- Deficit of 0.3m b/d in Q4CY21E

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