COVID-19 and the Energy Industry – A Transitory Shock or New Path? Dr. Carole Nakhle CEO, Crystol Energy Ron Beck Industry Marketing, AspenTech December 8, 2020

Today's Speakers



Moderator

Lee Nichols

Editor-in-Chief Associate Publisher, Hydrocarbon Processing



Dr. Carole Nakhle CEO, Crystol Energy



Ron Beck

Industry Marketing, Aspen Technology



COVID-19 and the energy industry: A transitory shock or new path?

Dr. Carole Nakhle CEO, Crystol Energy

12/08/2020



Energy Expertise. Global Reach.



Outline

- COVID-19: Assessing the damage
- Survey:
 - Overview
 - Key findings
- Where next?



Outline

- COVID-19: Assessing the damage
- Survey:
 - Overview
 - Key findings
- Where next?



What happened?





A crisis like no other



World GDP growth rate



Oil Demand: short/mid term view





OPEC++





Oil price collapse and 'recovery'



Bloomberg, EIA, 2020



Market expectations



Oil Majors Share Price and Brent Oil Price (June 2020 = 100)



Outline

- COVID-19: Assessing the damage?
- Survey:
 - Overview
 - Key findings
- Where next?

International representation, across a wide range of businesses



Powered by Bing © DSAT Editor, DSAT for MSFT, GeoNames, Microsoft, Navinfo, TomTom, Wikipedia





Preparedness to deal with COVID-19

- 41% (73 companies) or 4 out of 10 companies were well prepared or very well prepared; 38% (67 companies) somewhat prepared and 20% (36 companies) not well prepared or not at all prepared.
- Top 3 most prepared: Technology licensors; Diversified energy; Professional services.
- **Top 3 least prepared:** Small-/mid-sized oil and gas; Oil and gas field service; Downstream refining and petrochemicals.





Preparedness to deal with COVID-19 by company type

• Publicly listed companies were the most prepared, followed by state-owned companies then private companies.



Challenges for the organization due to COVID-19



- Most important challenge: Ensuring the safety of workers with 90% saying it was extremely important or very important.
- This was followed by **Readiness to work digitally** 76% and **Pressure on margins** 65%



Please rate the importance of the following challenges for your organization due to the Covid-19 crisis

Challenge: Pressure on margins by industry type



• **Top 3:** Engineering, procurement and construction (100%); Downstream refining and petrochemicals (84%), Major oil and gas (80%).



Challenge: Pressure on margins by company type



• State-owned companies placed less importance on margin pressure



Priorities pre- and post-COVID

- Cryst
- Top 3 pre and post-COVID priorities are the same, namely: Operational and employee safety; Optimising
 operational efficiency; Improving competitiveness

Operational and employee safety Optimising operational efficiency Improving competitiveness Digitalisation and other new technologies Environmental, social and corporate governance (ESG) Defending market share Diversity and inclusion Expansion and investment Raising capital Diversification of assets and activities 0

Pre- and post-COVID Ranking



Please rate the importance of the following priorities for your organization pre Covid-19?

Net change in priorities pre-and post-COVID

Net change in extremely important or very important rating: Digitalization and other new technologies (14%, rank 4); Diversification of assets and activities (8%, rank 10 then 8); Improving competitiveness (7%, rank 3)

Net change in pre- and post-COVID importance



Extremely important or very important



Organisational response to COVID-19

 Highest response to the pandemic by companies is adopting flexible work environment (home office) (15%) followed by introducing new safety rules (13%) and accelerating digitalization (12%).



How has your organization responded to Covid-19?

Organisational response to COVID-19: Top 3 by company type



- Publicly listed firms: Restructured physical asset composition (38%); Restructured financials (34%); Suspended operations (34%).
- Private firms: Accelerated digitalization (59%); Reduced capital costs (59%); Cancelled projects (58%).
- State-owned firms: Delayed FIDs (20%); Suspended operations (19%); Deferred maintenance (18%).





Top concerns for the next 5 years and longer term

Concerns for the next 5 years



Longer term concerns

Which of the following risks to your organization represent your top 3 concerns for the next 5 years?

Concerns for the next 5 years: Top 3 by company type

- Private companies: Increasing taxation (71%); Shrinking market (66%); Peak oil demand (64%).
- Publicly listed companies: Oil and gas price volatility (34%); Circular economy and climate change (33%); Cyber attacks (32%).
- State-owned companies: More stringent regulations (22%); Competition from alternative sources of energy (18%); Geopolitical tensions (17%).





Concerns for the longer term: Top 3 by company type

- Private companies: More stringent regulations (77%); Peak oil demand (69%); Oil and gas price volatility (64%).
- Publicly listed companies: Circular economy and climate change (33%); Cyber attacks (32%); Deglobalization (e.g., trade wars) (32%).
- State-owned companies: Increasing taxation (23%); Geopolitical tensions (23%); Cyber attacks (17%).





Industry's outlook post COVID-19



• **Top 3:** Major companies are looking to diversify outside of oil and gas; The transition toward cleaner fuels will accelerate across the world; Investment cuts today will lead to a tight market in the next five years



Which of the following statements do you agree describe the industry's outlook post Covid-19?

Industry outlook post COVID-19: Top 3 by company type



- **Private companies:** The transition toward cleaner fuels will accelerate across the world; The industry will rebound stronger from COVID-19 and the oil price reduction; Major companies are looking to diversify outside of oil and gas.
- Publicly listed companies: Low oil and gas prices are here to stay; Investment cuts today will lead to a tight market in the next five years; Major companies are looking to diversify outside of oil and gas.
- State-owned companies: The industry will need strong government support and incentives to survive; Low oil and gas prices are here to stay; Major companies are looking to diversify outside of oil and gas.

Major companies are looking to diversify outside of oil and gas		56%		28	28%	
The industry will need strong government support and incentives to survive		55%		23%	23%	
The industry will rebound stronger from Covid-19 and the oil price reduction		67%			23%	9%
The transition toward cleaner fuels will accelerate across the world		58%		27%		15%
Investment cuts today will lead to a tight market in the next five years		55%		31%		14%
Low oil and gas prices are here to stay		49%		34%		17%
■ Private ■ Public ■ State-owned	0%	20%	40%	60%	80%	1009

Cryst

Industry focus to meet the challenges post COVID-19

• **Top 3:** Improving efficiency and cost reduction; Adopting digitalization and other new technologies; Adopting a more flexible work environment (home office)



Where do you see the industry focusing in order to meet the challenges of the post Covid-19 world?

Areas of digital technology that offer the greatest opportunities



• **Top 3:** Mobility/cloud/remote operations; Artificial Intelligence (AI)/machine learning; Smart machines/infrastructure



What are the areas of digital technology that offer the greatest opportunities for your organization?



Outline

- COVID-19: Assessing the damage
- Survey:
 - Overview
 - Key findings
- Where next?



A weakening relationship

Pandemic





Are we missing something?

- Path dependent process:
- Choices based on transitory conditions can persist long after those conditions have changed.
- Path dependent processes are non-linear and can lead to multiple outcomes.
- Predicting the final outcome requires a detailed analysis of changing conditions and becomes more difficult than just a return to some initial state as multiple results are feasible.
- It may therefore be useful not to view the immediate future as the re-adjustment to a temporary disrupted equilibrium but as providing the conditions for developing on a new path that could easily discredit current forecasts.



Thank you!

carole.nakhle@crystolenergy.com @carole_nakhle

@CrystolEnergy

© CRYSTOL



4 -12 Regent Street | London, SW1Y 4PE, United Kingdom | Tel: +44 203 356 2976

www.crystolenergy.com

Panel Discussion and Questions



Moderator

Lee Nichols

Editor-in-Chief Associate Publisher, Hydrocarbon Processing



Dr. Carole Nakhle CEO, Crystol Energy



Ron Beck

Industry Marketing, Aspen Technology



Thank You!