

How will Qatar's multi-billion dollar LNG expansion impact the economy?

- Qatar, the world's largest LNG producer, is expanding output by 30% at a cost of \$30bn to \$40bn
- The impact on GDP can be split into 2 phases, (i) the investment phase (up to 2024) when new jobs will drive aggregate demand in the non-hydrocarbon economy and (ii) the increase in hydrocarbon production in 2025-26
- Combined with the Barzan gas project and a 2022 FIFA World Cup boost, we expect growth to average 4.6% over the next 10 years, peaking at over 10% in 2026
- The challenge for the authorities will be to make this growth stick by successfully implementing the measures they have taken to improve the business environment
- If the companies and people that are attracted to Qatar by strong growth in the 2020s can be persuaded to stay, the ephemeral 2030 vision of a knowledge-based economy may actually become one step closer to a concrete reality

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Qatar, the world's largest producer, is pressing ahead with plans to expand LNG (liquefied natural gas) output by 30%. The project is expected to add three "mega trains", with potential to add a fourth, at a total cost of between \$30bn and \$40bn once all ancillary projects are taken into account.

The target completion date is 2024 and the lead engineering company is already at work. Large LNG projects typically take around 5 years to complete so a swift ramp up in investment is likely in the early 2020s followed by a sharp increase in production of LNG and related liquids from 2025/26. The outlook for LNG prices is bullish with prices now recovering strongly and the global market expected to tighten in the mid-2020s.

How will this impact the economy?

The impact on Qatar's GDP can be split into two distinct phases, the investment phase from 2018-24 followed by increased production of hydrocarbons from 2025/26.

i) Investment phase

The \$30-40bn total investment in the LNG expansion amounts to around 20% of Qatar's 2018 GDP. Although much of the capital and machinery will be imported, there is still likely to be a large multiplier effect on the domestic non-hydrocarbon economy as engineers, oil services companies and construction workers are brought into the country driving up aggregate demand. This is likely to lead to increased demand for a range of services in the non-hydrocarbon sector from retail to education and health.

To gauge the scale of this impact we have examined 2 past expansions in Qatar's LNG production and estimated their impact on the non-hydrocarbon economy.

Firstly, we examined the investments for Qatar's RasGas trains 1 & 2 in 2000-05 and found that for every dollar invested, the non-hydrocarbon economy expanded by 1.8x that amount. The large impact is likely exaggerated because the non-hydrocarbon economy was significantly smaller at that time so the large hydrocarbon investments had a bigger impact. Non-hydrocarbon GDP averaged less than \$7bn in 2000-05 compared with over \$100bn currently.

Secondly, we looked at the investments for RasGas 3 and QatarGas trains 2, 3 and 4 during 2005-11. Here we found that for every dollar invested, the non-hydrocarbon economy expanded by 0.4x that amount.

Therefore, looking at the next LNG investment period from 2019-24 we scale down the multiplier to a relatively conservative 0.2x to take account of the larger non-hydrocarbon economy. The ramp up in investment is expected to be rapid so we have assumed a profile that concentrates the investment in 2021-23. This implies that the LNG investment should add between 1-2 percentage points to growth in the non-hydrocarbon sector during this peak investment period.

ii) Hydrocarbon production increase

The second impact on GDP growth will be from the actual increase in LNG production and related liquids. The time from initial production to capacity is expected to be relatively short, around 18 months. We assume some slippage with initial production in 2025 with capacity achieved in 2026. This would add around 13% per year to hydrocarbon GDP. In addition, new petrochemical facilities, such as what is expected to be the Middle East's largest ethane cracker with a capacity of 1.6m tons per year, will also add to manufacturing GDP in 2025-27 (in the national accounts, manufacturing GDP is actually part of the non-hydrocarbon sector so this is where the ethane

cracker is included in our forecasts). Higher revenue to the government and other companies would lead to stronger spending and consumption in the public and private sectors. However, given the risk of creating further excess capacity in the economy, the government is likely to be restrained in its investment, leading to higher surpluses on the fiscal and current account and larger transfers to the sovereign wealth fund.

Along with a boost from the Barzan Gas Project (2020-21) and the 2022 FIFA World Cup, the LNG expansion should provide a positive boost to Qatar’s GDP growth throughout the 2020s, with overall GDP growth just touching double digits around 2025/26. This should be sufficient to offset a steady slowdown in other parts of the economy as the government eases back from past heavy investment in infrastructure.

Real GDP growth in Qatar

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total	2.4%	3.4%	3.9%	4.2%	5.1%	3.2%	2.5%	9.8%	10.3%	3.7%	1.9%
Hydrocarbon	-0.2%	0.8%	1.8%	1.8%	-0.2%	-0.2%	-0.2%	12.5%	12.8%	-0.2%	-0.2%
Non-hydrocarbon	4.8%	5.7%	5.7%	6.2%	9.2%	5.6%	4.3%	8.0%	8.6%	6.4%	3.2%

Conclusion: the challenge will be to make this growth stick...

The challenge for the authorities will be to make this growth stick. The boost to aggregate demand will provide plentiful opportunities for the private sector and foreign investors if they are given the room to act. The government’s response to the blockade by regional neighbours has been to make itself more attractive to the international community. Steps to improve the business environment have been taken, most notably relaxing visa requirements and permitting foreign investors to own 100% of new companies (this law still requires sign off from the Emir and may be subject to restrictions in some sectors). The test will be how well these measures are implemented. If Qatar can seize the opportunities presented by a booming economy in the 2020s, it’s ephemeral 2030 vision of a knowledge-based economy may actually become one step closer to a concrete reality.