

# Dragoman Digest

## India and the US flesh out technology partnership

*Defence co-production mechanism aims to help wean India off Russian military kit*

Last week in Washington, the **US** and **India** [added](#) detail to their previously announced 'initiative on Critical and Emerging Technology' ([iCET](#)). The countries will cooperate on 5G, semiconductors, quantum computing, rare earth processing and AI. Tangible deliverables include a pledge by US and Indian semiconductor industry bodies to identify joint investment opportunities, and a commitment by Washington to remove certain high-tech export controls. The US and India will also deepen collaboration on India's civil space capabilities.

The most geopolitically consequential outcome of the iCET is the creation of a defence innovation and technology cooperation mechanism. Washington and New Delhi will first target the joint production of jet engines, artillery systems and armoured infantry vehicles. General Electric is understood to have already submitted a proposal for the joint production of jet engines.

The partnership is clearly aimed at reducing Indian dependence on **Russian** weapons systems. Though major purchases have stalled in recent years, approximately [85 percent](#) of India's military kit is from Russia. Russia's success in this domain is partly due to decades of tech transfers and joint production, which supported India's strategic priority to develop an indigenous military-industrial base. Washington's partnership looks to emulate this strategy. **France** and the **UK** have also [signalled](#) that they will form joint production partnerships with India. The partnerships are a necessary step, however, years of effort will be required to reduce India's dependency on Russia.

## Vietnam's 2030 energy plan enters the third year of delay

*Delays will challenge Vietnam's attractiveness to foreign manufacturers*

**Vietnam's** eighth national energy plan, known as the PDP8, has been [delayed](#) by more than two years. The 10-year energy planning tool was originally intended to be approved by the end of 2020. The [most recent draft](#), released last November, provides a snapshot of the thinking of Vietnamese policymakers at that time. Under the draft, by 2030, coal will remain the country's largest source of energy, representing 30 percent of total capacity, compared to around 50 percent in 2020. Natural gas will increase from 14 percent to 25 percent. Renewables will increase from 5 percent to 18 percent (including 6 percent for [offshore wind](#)).

One of the initial causes of delays was a surprise net-zero pledge from Prime Minister **Pham Minh Chinh** at COP26. The unexpected announcement prompted energy mandarins in Vietnam to target the use of natural gas as a transition fuel. Rising gas prices brought on by the war in **Ukraine** have complicated the viability of the plan. The bureaucracy is bitterly divided on the ideal path forward. Some have even argued for an increase in coal production as being key to fixing Vietnam's current energy deficiencies.

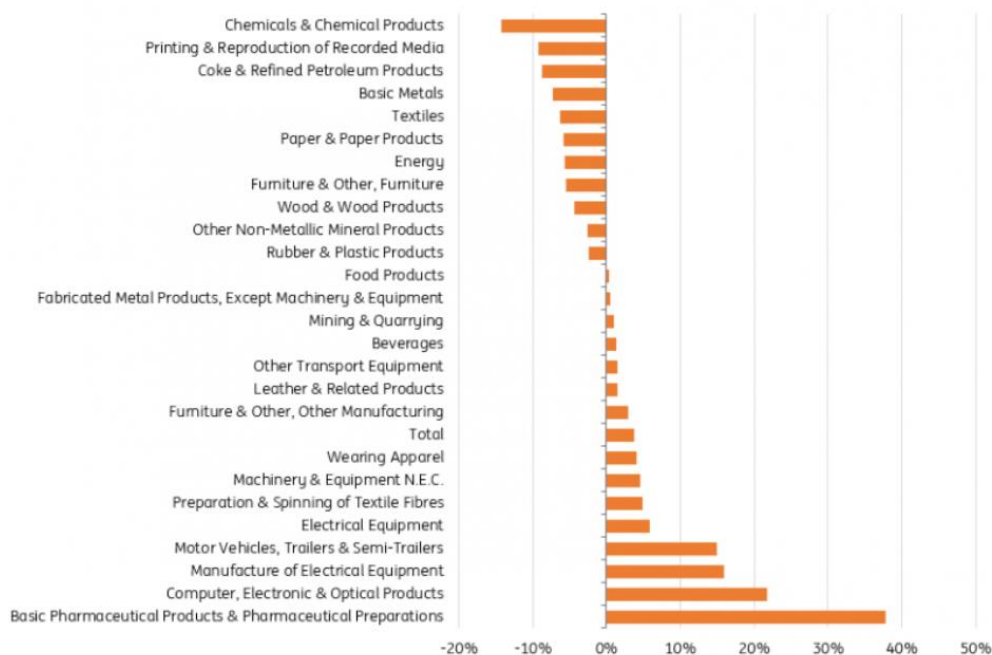
Delays in the implementation of Vietnam's renewable projects may reduce the country's attractiveness to **US**, **EU** and **Japanese** companies looking to diversify manufacturing away from **China**. Even before the plan's delay, companies seeking green power already faced pronounced difficulties. Alternative manufacturing hubs such as **India** have more clearly stated plans, as well as avenues for policy support. Vietnam's recent purge of senior public officials has also done little to inspire confidence. The need to unlock US\$15 billion of funding promised under the [Washington-led Just Energy Transition Partnership](#) may eventually prompt a more bullish embrace of renewables.

## Eurozone industrial sector posts surprise growth despite worst-case scenario predictions

*Triumphalist conclusions that Europe has weathered the worst of the energy crisis may be premature*

The **Eurozone** economy [recorded](#) unexpected industrial growth in the final three months of 2022, suggesting the de-industrialisation of the continent may not have been as [widespread](#) as initially feared. Reliant on cheap inflows of **Russian** gas, the war in **Ukraine** was expected to weigh heavily on European industrial output. With supplies of Russian gas being cut by over 80 percent this year, wholesale prices of energy have surged as much as fifteen-fold since early 2021. High energy prices forced many industries to reduce output. Despite these forecasts, Eurozone (which excludes Bulgaria, Czechia, Hungary, Poland, Romania and Sweden) industrial production increased by 2 percent year-on-year in November – beating market forecasts of a 0.5 percent increase. According to [preliminary Eurostat data](#), GDP in the Eurozone increased by 0.1 percent in the fourth quarter – modestly outperforming a predicted contraction of 0.1 percent during the same period.

### Growth in Eurozone Production by Subsector from October 2021 to December 2022



Source: ING

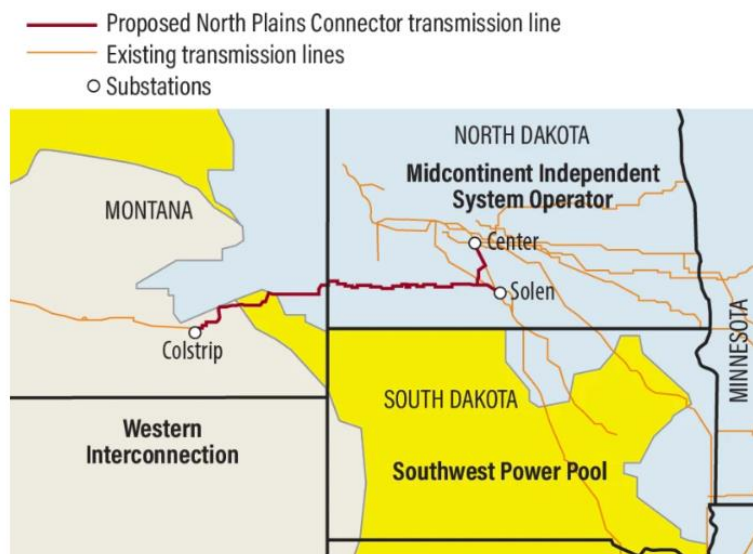
Europe is by no means out of the woods. A milder-than-expected winter and the massive efforts to fill gas inventories have provided much of the relief. [Germany's](#) chemical sector output has still slumped 15 percent from pre-energy shock levels. The EU's chemical industry on the whole has contracted over 14 percent since October 2021. There is no guarantee that Europe can avoid an energy crisis in 2023. Rising demand from **China** and a cold snap during winter could disrupt the outlook. An aggressive shift to firmed renewables may be the EU's best path to ensure the integrity of its industrial base.

## US\$2.5 billion transmission link to double transfer of electricity between US grids

*State laws and public opposition may yet hinder its construction*

Connecting the US' disparate energy markets has been made more urgent by Washington's **Inflation Reduction Act**, which aims to deliver over 550GW of new renewable energy capacity by 2030. Grid connection is necessary to avoid grid congestion and renewable curtailment. There are signs of early movement. US energy utility Allete and transmission developer Grid United [announced](#) plans in late January to jointly construct a US\$2.5 billion transmission line from North Dakota to Montana. The 619km North Plains Connector will deliver 3GW of bi-directional capability between the Western Interconnection and the two regional transmission organisations in the Eastern Interconnection: the Southwest Power Pool and the Midcontinent ISO. The North Plains Connector will link three fragmented regional electricity markets.

### Proposed North Plains Connector transmission line



Source: Allete and Grid United

Completion of the North Plains by the target date of 2029 will not be without its difficulties. US states hold exclusive powers to object to the construction of transmission lines. The last transmission project proposed in Montana, the Mountain States Intertie, was ultimately shelved after meeting widespread opposition. Ultimately, the US faces a herculean task in upgrading and expanding its networks. On some estimates, every year, it will need to build several transmission corridors (each with over 12GW of bi-directional capacity) if it is to achieve its target of 100 percent renewables by 2035.

## Israel advances shadow war with attack on Iranian weapons facilities

*Targeted sites were likely used to manufacture weapons for Russia*

Israel's balancing of its relationship with the **US** and cooperation with **Russia** is becoming increasingly difficult. Last month, four **Iranian** military facilities were [attacked](#), almost certainly by Israel. One of the facilities, in Isfahan, manufactures [Shahed-136 drones](#), which Russia has used to devastating effect in **Ukraine**. Shahed drones are accurate, inexpensive and long-range. Other targeted facilities housed hardware that facilitates flights between Russia and Iran and ballistic missile production capabilities.

The attacks come despite Israel's persistent refusal to directly send arms to Ukraine. Israel has been hesitant to directly antagonise Russia, whose acquiescence is needed to facilitate Israeli strikes on Iranian targets in **Syria**. Russia and Israel also have an [informal arrangement](#) whereby Russia limits military supplies to Iran in exchange for Israel refraining from selling weapons to Ukraine. This agreement will increasingly be tested as Iran seeks advanced Russian kit in exchange for its support in Ukraine.

The latest strikes suggest that Israel, amid pressure from the US to aid Ukraine, has found a palatable compromise which avoids overtly antagonising Russia. The striking of Iranian targets has the added effect of illustrating Israel's ability to disrupt Iran's weapon manufacturing capabilities amid advances in its nuclear weapons program.