# UNDERSTANDING THE ENERGY TRILEMMA, WITH JULIO DAL POZ

*"There is no optimum space in the middle. This is an inherently unstable system where you have to keep resolving trade-offs as you go along. There will be tough choices along the way"*
*– Julio Dal Poz*

***A trilemma, also known as an impossible trinity, occurs when three desirable choices or outcomes cannot all be achieved at once; only two of the three, in various combinations, are possible.***

*Julio Dal Poz of FTI Consulting (formerly Senior Strategy Advisor at Equinor) sees this phenomenon at the root of global energy markets today, particularly as they respond to the Ukrainian war. But what exactly is the 'energy trilemma.' And what lessons does it hold for executive decision-making?*

## THE ENERGY TRILEMMA, EXPLAINED

**SECURITY:** How reliable are an economy's energy supplies? This involves import-dependence, intermittency, resilience, volatility and capacity concerns

*Secure and Sustainable: a nation with a high share of domestic renewables production.*
*This transition was likely made at considerable cost, energy is poorly shared across the economy, or involves volatile prices due to intermittency and capacity*
*FINLAND, KENYA*

*Secure and equitable: a nation which relies on cheap, abundant fossil fuels. These may be domestically produced, or imported from stable trading partners.*
*This is likely a carbon-intensive system*
*CANADA, GERMANY*

**SUSTAINABILITY:** How polluting are an economy's energy sources? Consider not only domestic production, but also imported carbon, and energy efficiency/intensity

**EQUITY:** How expensive is energy? This should be measured on a whole-economy basis, including the effect of taxation and subsidy regimes, and how fairly energy is distributed across the economy. Price stability can also be a factor here

*Sustainable and equitable: a nation which relies upon the cheapest possible clean energy sources, or distributes domestic clean energy fairly.*
*Much of it may be intermittent or highly reliant on imports.*
*This is likely to be vulnerable to changing patterns of weather or trade*
*NORWAY, SWITZERLAND*

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## How leaders can think through trilemmas:

### 1. Don't let the great be the enemy of the good.

Perfection is rarely an option in reality. Instead, look for intermediate solutions that capture the majority of available gains, whilst leaving room for innovative ideas or new technologies to arrive in the future. For example, battery storage could have a huge impact on clean energy security and affordability. **Be pragmatic.**

### 2. Structural, or temporary?

Some trade-offs represent chokepoints in a development curve, rather than permanent limitations. For example, sustainability is only in conflict with affordability if up-front costs are high; the more committed you become to this path, the cheaper the build-out should become with scale. **Be bold.**

### 3. Definitions matter.

If equity is just about who can afford what today, renewables can seem a costly option. But if stakeholders can be convinced to reframe equity as intergenerational fairness, then clean energy becomes much more affordable even measured in dollar terms. **Be creative.**

For more insider alpha from one of the best clean energy investors around, listen to Julio Dal Poz's *Conversations in Climate* interview with United Renewables here.
You can find out more about Julio and FTI Consulting here.

Data drawn from Marti, L. and Puertas, R. 'Sustainable energy development analysis: energy trilemma,' Sustainable Technology and Entrepreneurship I (2022)

*"Quick, cheap, good: choose two"*
*– the anonymous tradesman*