Welcome to the world of 2050! The energy system has come a long way in terms of electrification across the entire spectrum of energy use except for air travel. Looking back over the recent history of energy evolution, the effectuation of the Paris Agreement in 2016 brought forth a completely different environment in favour of technological development towards “decarbonisation”. What was then unthinkable has become a reality today. For example, a new solar technology made silicon solar cells obsolete, which once dominated the incremental electricity generation capacity in the 2010s and the 2020s.

The world did not necessarily speak in one voice on climate change, where climate skeptics and deniers kept some influence. However, as “environmental compatibility” has been elevated to the most important rules of the game in business, climate initiatives became “economic necessity” leading to a self-accelerating process.

The progress of electricity storage technology, once irritably slow, was dramatically spurred through the 2020s, making electricity storage effective and affordable. Precious metals such as lithium for high-performing batteries have been replaced with more abundant materials.

The above progresses made a flexible combination between centralized and distributed energy systems possible adjusting to a variety of needs. Therefore, a developing country no longer has to build a nation-wide and costly high-voltage electricity transmission network only. “Energy poverty” has been eradicated, albeit step by step, even in Africa thanks to the spread of distributed power system, which cost has dramatically dropped due to technological development and wider application.

The unchanging “fickleness” of human nature, the biggest problem hindering the efficient and optimum use of energy, has been gradually overcome by the wider application of artificial Intelligence at various levels encompassing household, office, city and region.

The countdown of the end of fossil fuel age has already begun. The use of fossil fuels is increasingly limited to large-scale power generation or heat supply in certain locations, and the scope of nuclear option continues to narrow challenged by social and political acceptability. Reflecting this new energy reality, the following song became popular, which is set to the melody of the theme music of Walt Disney “It’s a Small World”:

**A Song for Energy Future (words by T. Masuda)**

1. It will be the source of joy
   Safety will be the norm
   To make the people and earth happy
   And there’s no geopolitics
2. Energy poverty will be history
   La la la, La la la, La la la, La la la
   Universal access to everyone
   This is our future