

The Renewable Energy Landscape of the UAE

A closer look at the legal framework and investment opportunities

Dr. Paul Nimmerfall (Strohal Legal Group)



About Strohal Legal

- International commercial law firm
- HQ in Ras Al Khaimah, offices in Singapore and Thailand
- Historically, we are the only international law firm with an on-shore license in Ras Al Khaimah
- Strong ties to DACH region in Europe
- Focus on Business Law, Corporate/M&A, and Energy Law



More information can be found on our website: www.slg-strohallegalgroup.com



About myself



Dr. Paul Nimmerfall
Senior Legal Counsel



- Born and raised in Austria
- Master in Laws (Mag. iur.), PhD in Law (Dr. iur.)
- Currently studying Renewable Energy Systems at Technical University Vienna (MSc.)
- Several years at tier 1 law firm in Vienna
- Focus on Corporate/M&A, Energy Law, and Climate Change Law
- Expert Adviser on Climate, Energy, and Ressources at Austrian Federation of Industries
- Lecturer at University of Vienna, Vienna University of Business, and Modul University Dubai

Overview

1. What are „renewables“?
2. The UAE's renewable energy landscape
3. The legal framework
4. Business and investment opportunities

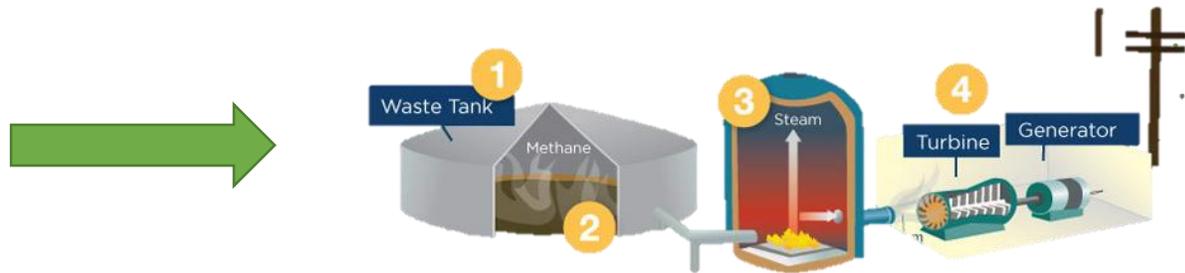


What are „renewables“?

Renewable energy sources



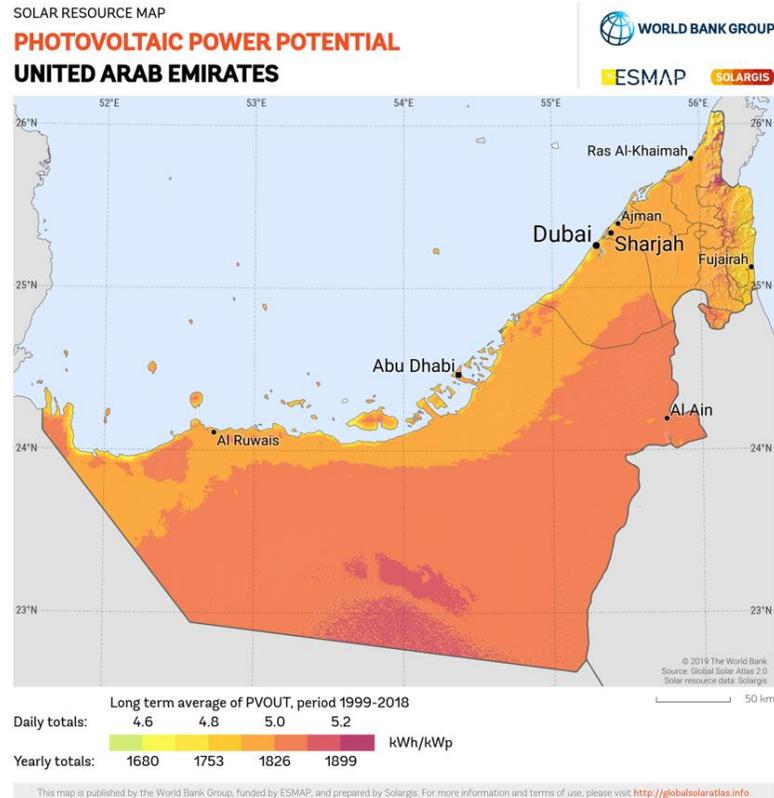
Non-renewable energy sources



The UAE's renewable energy landscape



The UAE's renewable energy landscape



- Great overall conditions to use renewables
- UAE ranked 44 by World Energy Council in overall ranking
- Energy performance and accessibility are very good (2 out of 102)
- However, environmental sustainability is rather bad (96 out of 102)
- ~22 tonnes of CO₂eq per capita

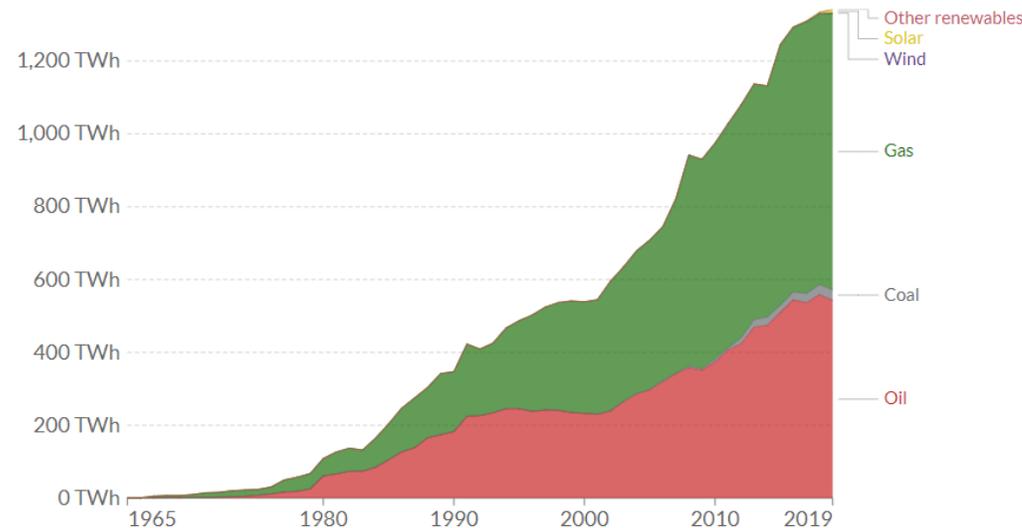
The UAE's energy consumption

Energy consumption by source, United Arab Emirates

Primary energy consumption is measured in terawatt-hours (TWh). Here an inefficiency factor (the 'substitution' method) has been applied for fossil fuels, meaning the shares by each energy source give a better approximation of final energy consumption.

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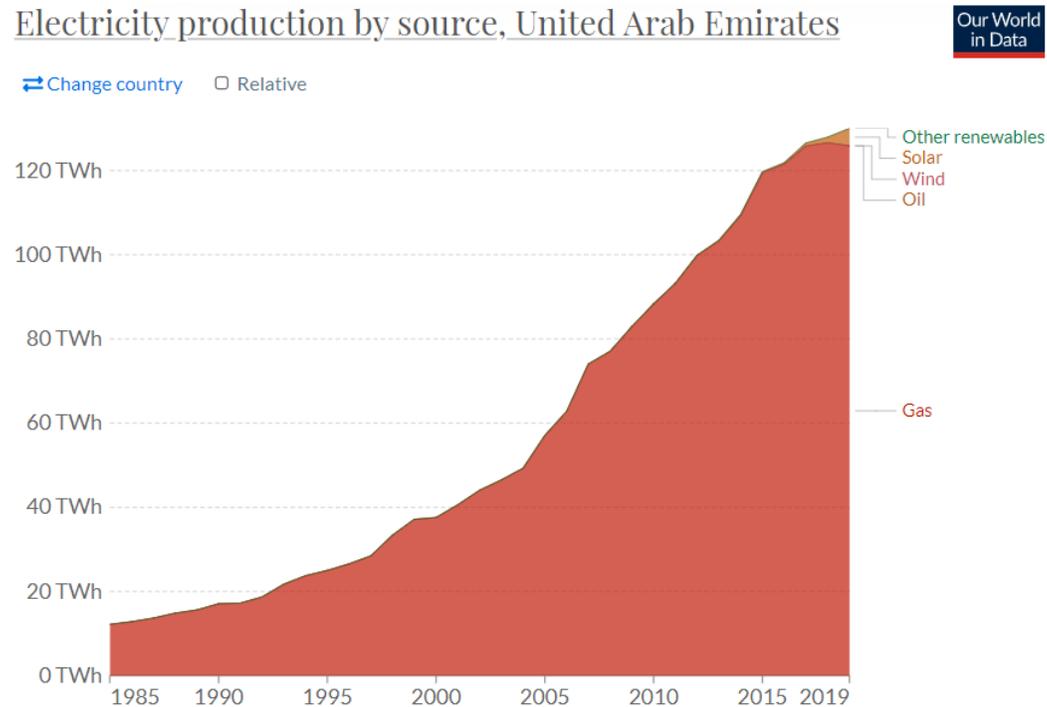


Source: BP Statistical Review of World Energy
Note: 'Other renewables' includes geothermal, biomass and waste energy.

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- Energy consumption includes includes all energy consumed, not just electricity
- The UAE's energy consumption has increased immensely in the last decades
- Up to now, the UAE's energy consumption still mostly comprises oil and gas
- Coal and renewables play a minor role
- Austria, a country comparable population and size, only consumes around 400 TWh per year

The UAE's electricity production



Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2021)
 Note: 'Other renewables' includes biomass and waste, geothermal, wave and tidal.

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- Up to now, electricity in the UAE is mostly produced from gas fired power plants
- Oil, coal, and renewables still play a rather minor role
- However, there is a steep increase of electricity produced from renewables in the recent years
- Austria, a country comparable population and size, produced around 70 TWh per year

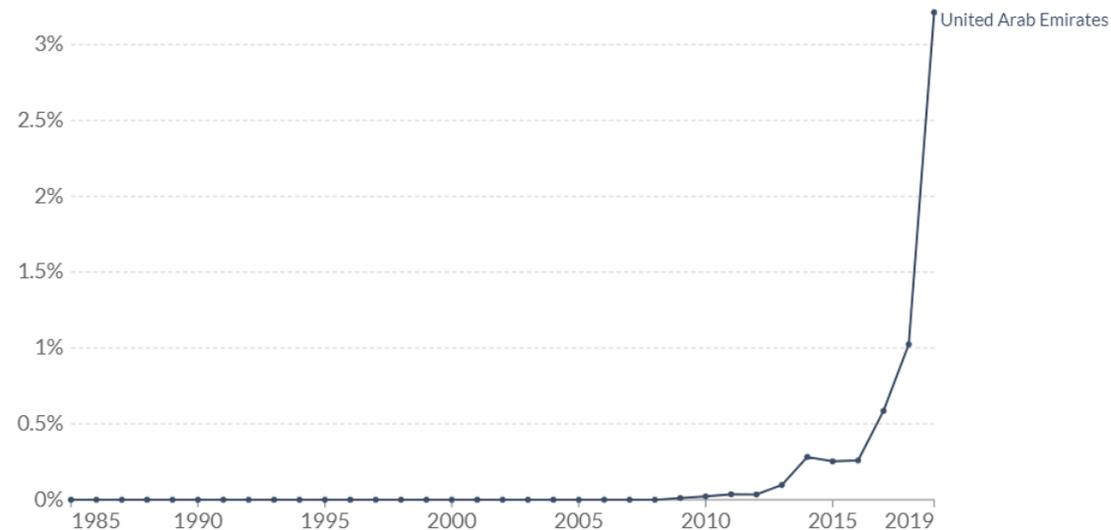
The UAE's electricity production

Share of electricity from low-carbon sources

Low-carbon electricity is the sum of electricity from nuclear and renewable sources (including solar, wind, hydropower, biomass and waste, geothermal and wave and tidal).

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Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2021)

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- There is a steep increase of electricity produced from renewables in the recent years
- This trend is likely to continue throughout the next years

Key takeaways

- In theory, the UAE would be the perfect country to deploy renewable energy solutions
- Up to now, most of the UAE's electricity is produced from gas fired power plants
- The UAE's share of renewables is still rather small
- However, renewables are on the rise and their share in the overall electricity mix will keep increasing in the next years
- This means business opportunities for energy producers, developers, and suppliers



The legal framework



Renewable energy policies

- UAE has ratified the Kyoto and Paris Agreement on Climate Change
- UAE Energy Strategy 2050 (Federal Level)
 - Vision 2030 (Abu Dhabi)
 - Clean Energy Strategy (Dubai)
 - Renewable Energy Strategy 2040 (RAK)
- „Sustainability“ is one of the three pillars of the Expo 2020
- Growing competition between emirates
- In 2050, the UAE's total energy mix should comprise of
 - 44% green energy,
 - 38% gas,
 - 12% clean coal, and
 - 6% nuclear



Legal framework



- The UAE electricity market is divided along the lines of its emirates
- Regulatory authorities: DOE in Abu Dhabi, DEWA in Dubai, SEWA in Sharjah, and FEWA in Ajman, Fujairah, Ras Al Khaimah, and Umm Al Quwain
- Dozens of standards and regulations issued by authorities and free zones
- However, there is yet no regulatory legal framework to promote renewable energy
- No public subsidies or feed-in tariffs

Legal framework

- Most projects are publically tendered and developed by independent power producers (IPP) either alone or with a public utility company
- IPP laws in Dubai and Abu Dhabi
- Electricity is usually marketed via long-term power purchase agreements (PPA)
- Renewable energy certificate systems
- New 100% foreign ownerships lists



Key takeaways

- Renewables are on the government's top agenda
- The emirates have set ambitious goals for the next years and decades
- There is no regulatory framework to promote renewable energy
- New „green“ legislation is likely to increase
- Even though there is no public supporting scheme for renewables, companies benefit from a very investor friendly business environment



Business and investment opportunities



Renewable energy projects

- Renewable energy projects can differ in size and form and range from a 2 GW solar park to a small desalination plant
- Companies benefit from cheap energy, electricity and labour costs
- Investor friendly environment
- COVID slowed things down but projects are coming into the country again



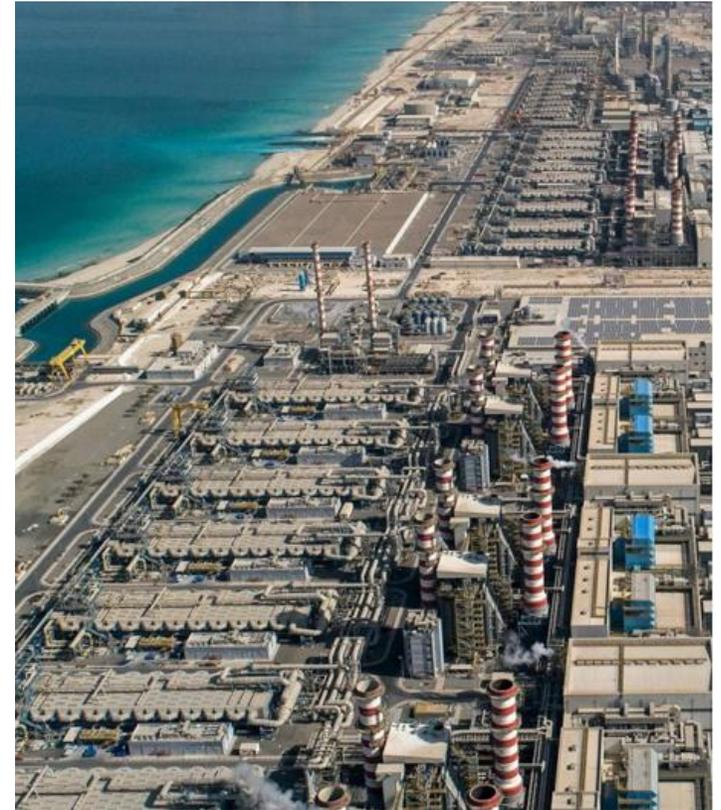
Hydrogen

- UAE wants to become a global player in the hydrogen market
- Almost perfect conditions for hydrogen production
- Several hydrogen alliances with European partners were concluded (eg, Germany, recently also Austria)
- UAE hydrogen market is still insignificant but expected to grow
- Business opportunities for companies of different industries (automotive, aviation, chemical etc)



Desalination

- Desalination technology could solve one of the world's biggest problems: fresh water scarcity
- Already, 42% of the UAE's total water requirement come from desalination plants
- The desalination process consumes a lot of energy
- Desalination plants could be fed with green electricity from renewable energy sources



Overall summary

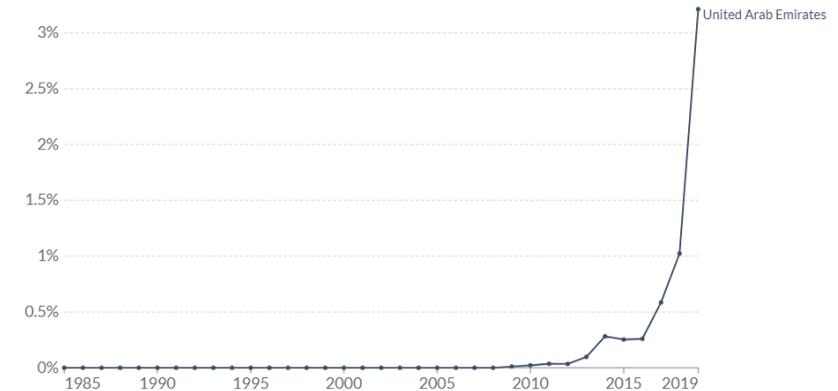
- The UAE provides great overall conditions to produce energy from renewable sources
- However, up to now, the UAE's energy sector still heavily relies on oil and gas
- In the recent years, there is an increasing trend towards electricity from low-carbon sources
- From a legal perspective, there is yet no regulatory framework to promote renewables
- But various other factors make the UAE an interesting market with growing business opportunities

Share of electricity from low-carbon sources

Low-carbon electricity is the sum of electricity from nuclear and renewable sources (including solar, wind, hydropower, biomass and waste, geothermal and wave and tidal).

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Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2021)

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Thank you for your attention



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Strohal Legal Group

Strohal Legal Group is an international business law firm focusing on the Gulf region (GCC) and Southeast Asia (ASEAN) advising clients on local and cross-border M&A transactions and corporate, business, and labour law matters, company establishments, energy and climate change law as well as tax law matters.

Our energy practice focuses on advising investors on energy projects in the region and on supporting them on regulatory matters. We are further convinced that climate change will, after all, also impact the legal landscape. To stay one step ahead we are therefore already engaged in the various aspects of climate change law.

