



# Finnish offshore outlook

4th of May, 2023

Wind Finland goes Offshore

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Finnish Wind Power Association

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# Finnish Wind Power Association (STY, FWPA)

- Valued industry association for wind power
- Established in 1988
- Over 210 company members, app. 160 private members
  - Wide range of companies related to wind power field
- 8 employees – **hiring two more in 2023!**
- HQ in Jyväskylä
- Spreads the word about the wind power, active participant in public discussion, publishes magazine "Tuulivoima", organizes seminars and courses

[www.fwpa.fi](http://www.fwpa.fi), [www.tuulivoimayhdistys.fi](http://www.tuulivoimayhdistys.fi)

[www.windfinland.fi](http://www.windfinland.fi), [www.tuulivoimalehti.fi](http://www.tuulivoimalehti.fi)



Suomen  
Tuulivoimayhdistys



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Aino



Anne



Maria

# Fast growing capacity

Wind power end of  
2022

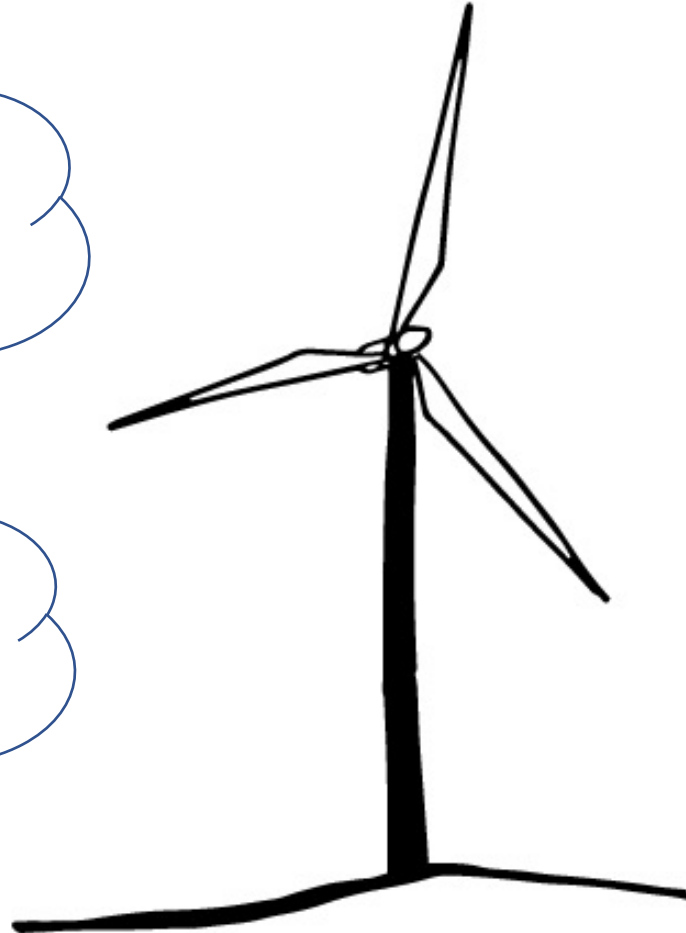
5,7 GW

1393 WTG

Coming online  
2023-2025\*:

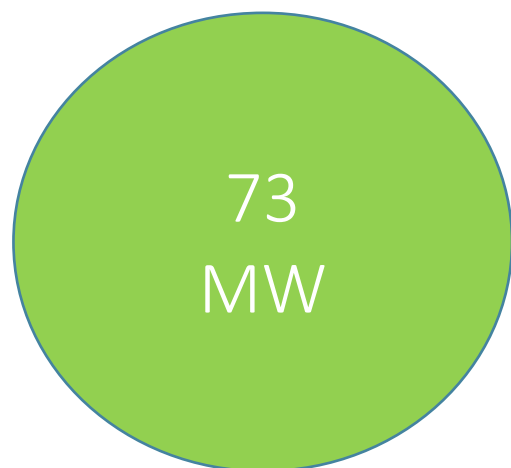
3,3 GW

500 WTG



\* According to the investment decisions  
published before 30<sup>th</sup> of Jan 2023

# So far not much offshore

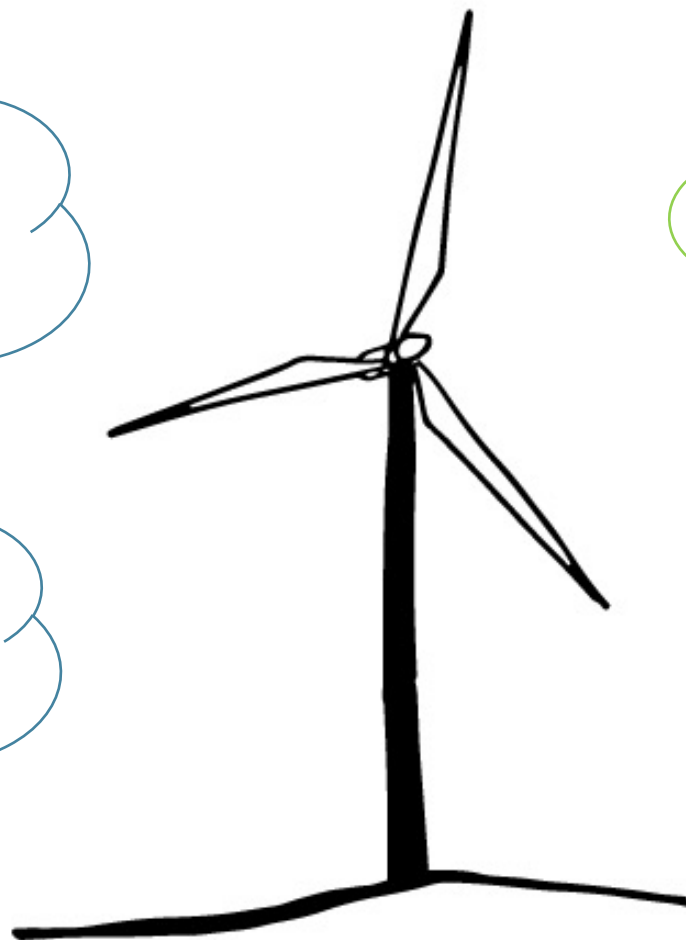




# Fast growing capacity

Wind power end of  
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5,7 GW  
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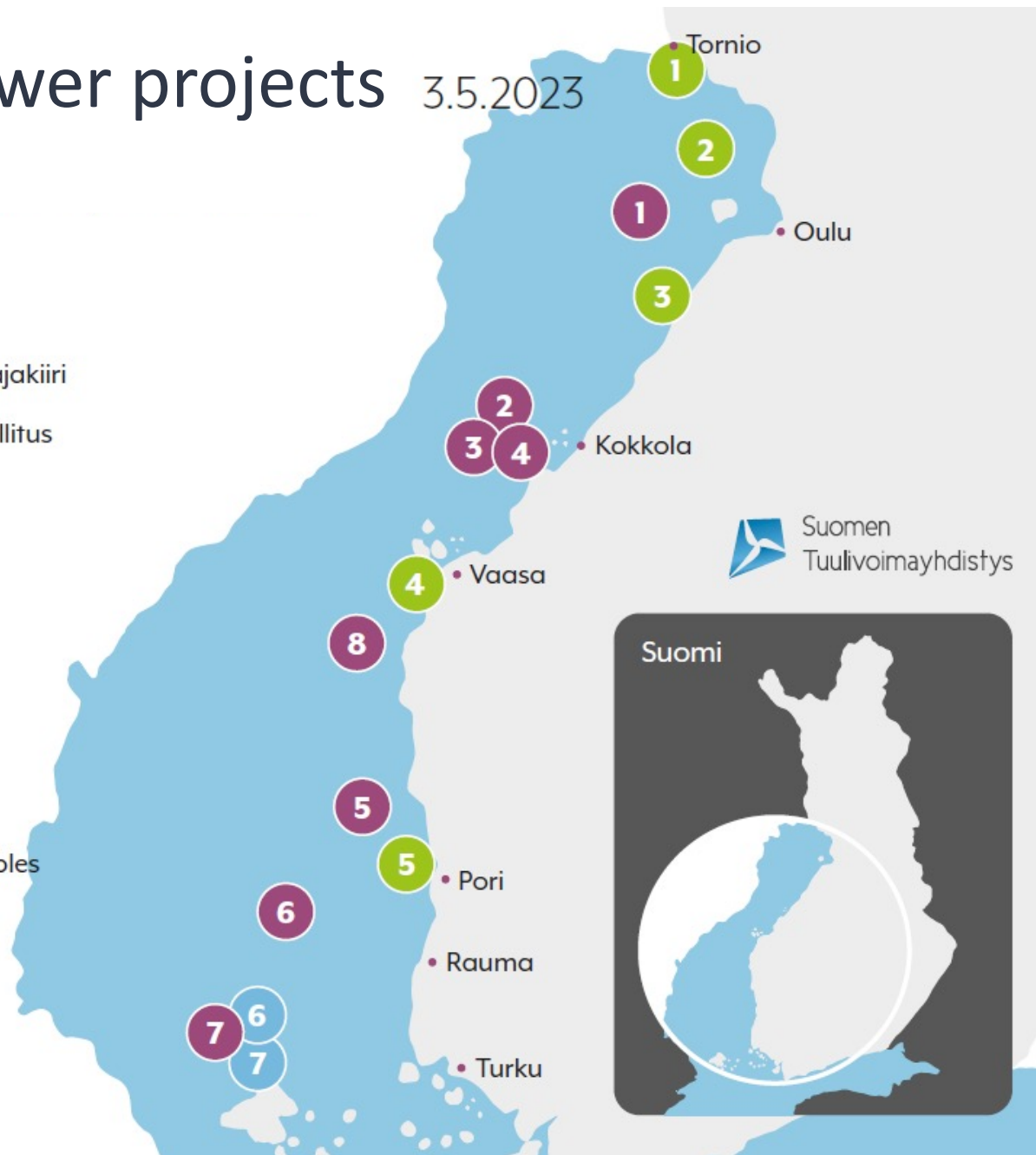
Onshore project  
pipeline:  
~50 GW  
300 projects

Offshore project  
pipeline:  
~33 GW  
20 projects

\* According to the investment decisions  
published before 30<sup>th</sup> of Jan 2023

# Offshore wind power projects 3.5.2023

- 1 Röttä, Tornio, Rajakiiri
- 2 Suurhiekkä, Ii, Skyborn Renewables
- 3 Maanahkiainen, Raahe ja Pyhäjoki, Rajakiiri
- 4 Korsnäs, Vaasa, Vattenfall ja Metsähallitus
- 5 Tahkoluoto, Pori, Suomen Hyötytuuli
- 6 Stormskär, Ilmatar
- 7 Väderskär, Ilmatar
- 1 Oulu/Raahe, OX2
- 2 Kokkola, Voima, Ilmatar
- 3 Pietarsaari/Kokkola, OX2
- 4 Pietarsaari/Kokkola, Skyborn Renewables
- 5 Merikarvia/Pori, Eolus
- 6 Rauma/Eurajoki, Eolus
- 7 Ahvenanmaa, Vågskär, Ilmatar
- 8 Korsnäs, Norrskär, Ilmatar



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Territorial water



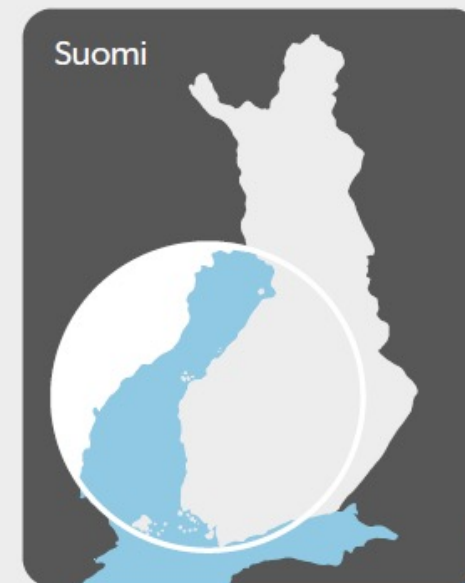
Åland



EEZ



Suomen  
Tuulivoimayhdistys



# What has happened during the past year?

- The project pipeline is growing:
  - Further 5 study permit applications for EEZ-area in the ministry
  - Metsähallitus announced that they will start the auctioning of 2 areas in 2023 and 2 areas in 2024 on territorial waters
- The report of Mr. Arto Rätty on the coexistence with military radars
- Finland has defined the TEN-E offshore targets:
  - 1 GW in 2030
  - 5 GW in 2040
  - 12 GW in 2050

FWPA: 100 TWh  
of annual  
production (~25  
GW) in 2040

# TSO Fingrid visions big for offshore

Note! 1 of 4 scenarios,  
the most positive for  
offshore wind power!



- According to Fingrid Network Vision, “Windy Seas” scenario, in 2035 (2045)
  - Electricity consumption is 163 TWh (210 TWh)
  - Offshore wind production 71 TWh (143 TWh)
- In all 4 scenarios the electricity consumption will rise from current 86 TWh to 128-188 TWh by 2035

# What needs to be done soon?

- Clarification of the exclusivity on EEZ
- Clarification of the costs involved in the EEZ
- Lowering the property tax to equal level with onshore turbines on the territorial waters
- The co-existence with military sensors should be solved
- Ambitious targets are needed



Photo: Suomen Hyötytuuli



# Why to set ambitious offshore targets?

The offshore project pipeline is **approximately 33 GW**.

It is estimated that these projects would be **on-line by 2045**.

33 GW offshore capacity would have got a remarkable employment and tax benefits to Finland.



The volume and the local content of the offshore projects have an influence on the tax and employment benefits.

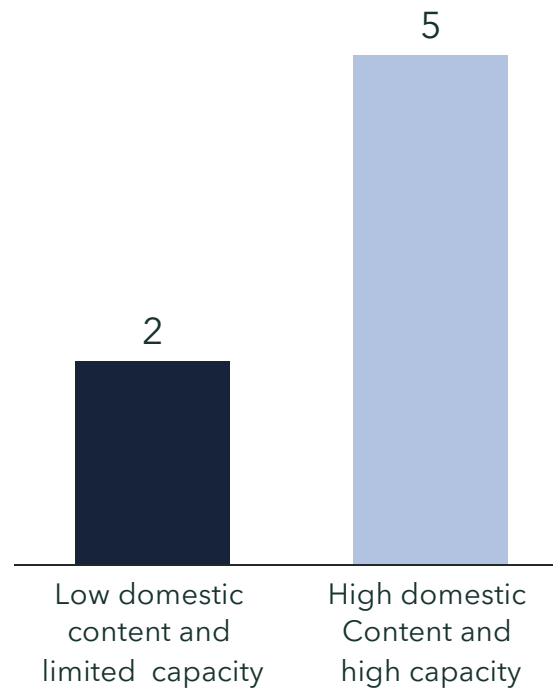
The 33 GW offshore project pipeline can mean **224 000 person-years** and the tax impacts **4,5 billion euros** over the lifetime of the wind farms.

# The full potential can be reached by investing in the Finnish supply chain.

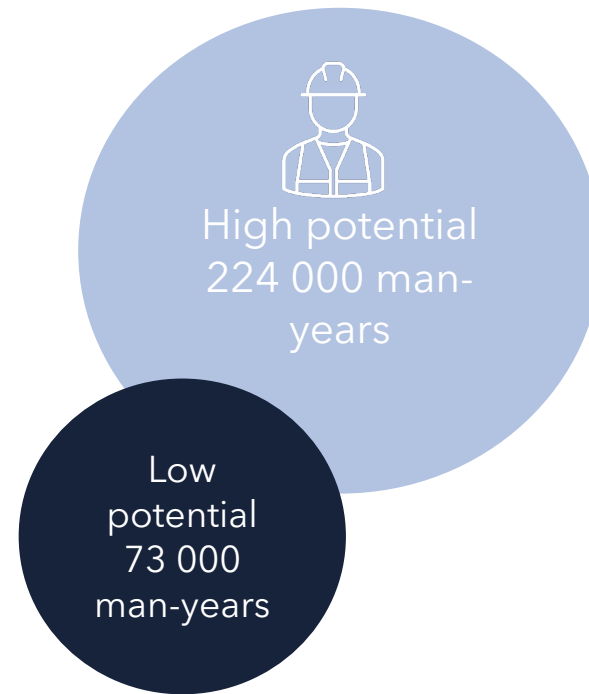


Investments in offshore wind power pays off in taxes and jobs.

Tax benefits (billion €)



Employment potential (man-years)



- Tax and employment benefits with low domestic content and small capacity (16 GW)
- Tax and employment benefits with high domestic content and high capacity (29 GW)

# 2030 and beyond – how much (offshore) wind power in Finland?

- Essential points are:
  - How much and how fast will the electricity consumption grow?
  - P2X solution and hydrogen projects – when, where, how much?
  - Future of demand response and storage solutions?
  - Wind power construction in Eastern Finland?

→ Wind power will help the industry, transportation and heating to become carbon neutral – but it can not do it on its own as the whole system needs to transform

# WIND

**WIND FINLAND 2023**

THE WIND POWER EVENT OF THE YEAR

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**4 OCT. 2023**

KAAPELITEHDAS, HELSINKI