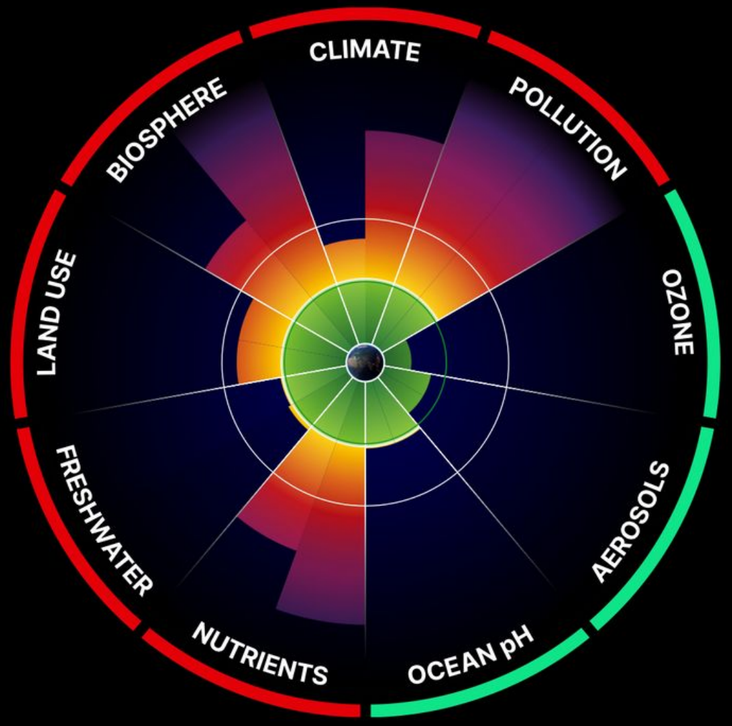
OBNOVITELNÉ ZDROJE ENERGIE A BUDOVY

Pavel Fojtík

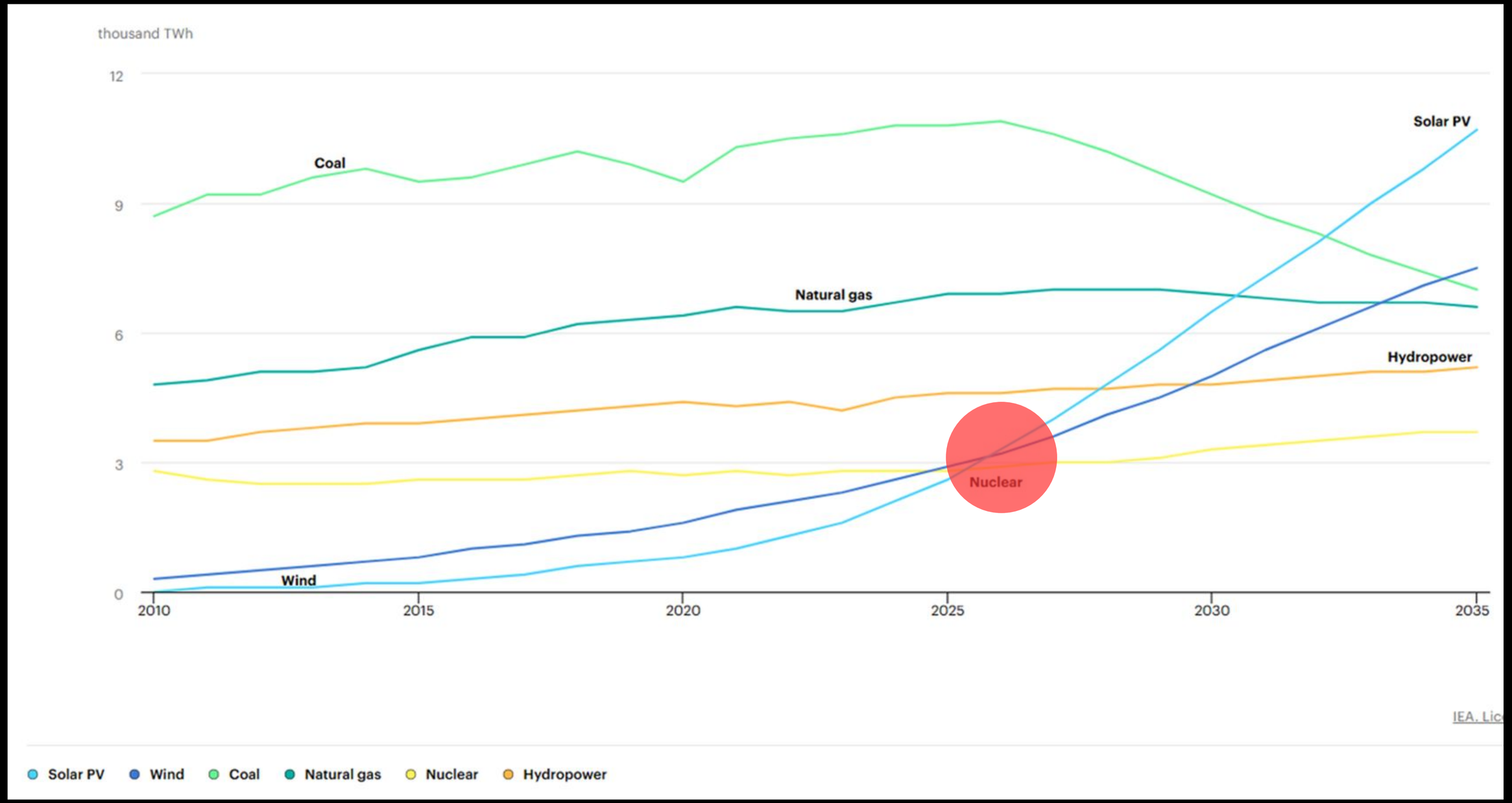

2050
› 70 %
용산역앞
용산역
Yongsan Stn(KTX)
서울역
Seoul Stn(KTX)
삼각지역
Samgakji Stn
동작대교


A NEW CITY FOR 1.5M PEOPLE
EVERY WEEK

KOMPLEXNÍ PŘÍSTUP K NÁVRHU ZALOŽENÝ NA DATECH



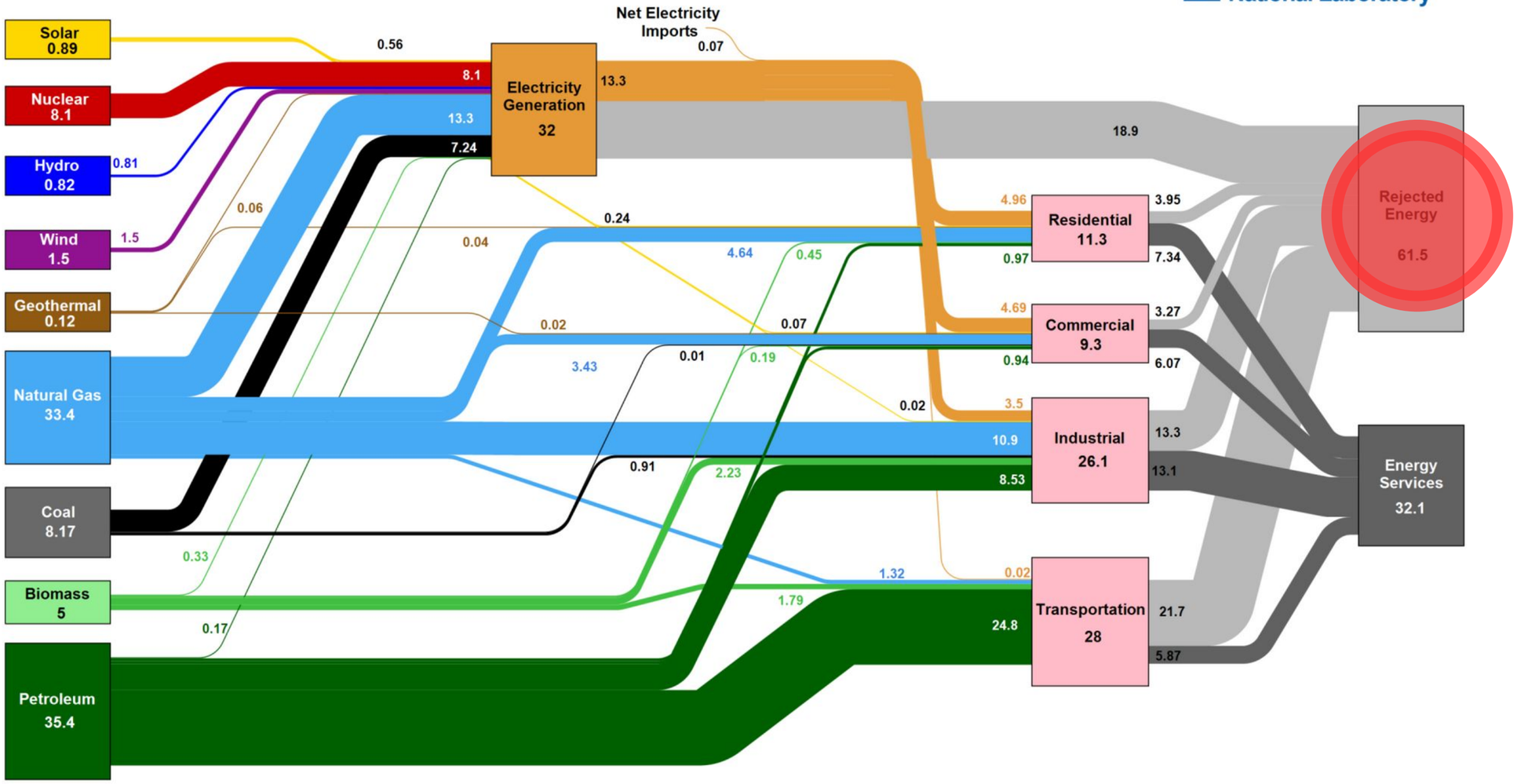
Source: planetaryhealthcheck.org


thousand TWh
12
9
6
3
0
2010
2015
2020
2025
2030
2035
Coal
Natural gas
Solar PV
Hydropower
Nuclear
Wind
IEA. Lic
Solar PV
Wind
Coal
Natural gas
Nuclear
Hydropower

Source: IEA

Estimated U.S. Energy Consumption in 2023: 93.6 Quads

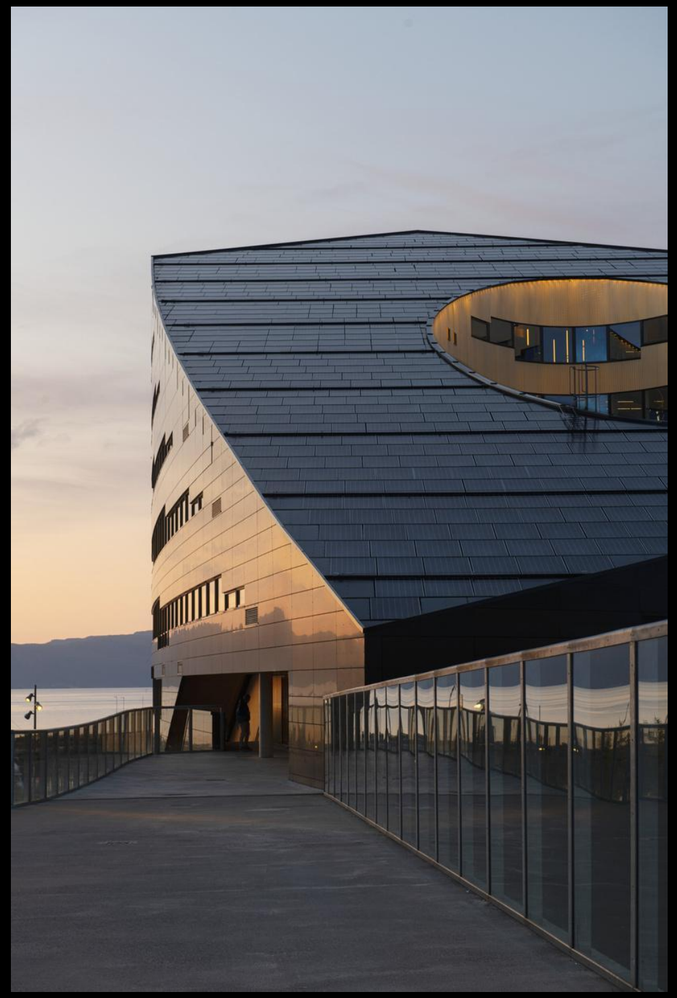
Lawrence Livermore National Laboratory



Source: LLNL October, 2024. Data is based on DOE/EIA SEDS (2024). If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. Distributed electricity represents only retail electricity sales and does not include self-generation. EIA reports consumption of renewable resources (i.e., hydro, wind, geothermal and solar) for electricity in BTU-equivalent values by assuming a typical fossil fuel plant heat rate. The efficiency of electricity production is calculated as the total retail electricity delivered divided by the primary energy input into electricity generation. End use efficiency is estimated as 65% for the residential sector, 65% for the commercial sector, 49% for the industrial sector, and, 21% for the transportation sector. Totals may not equal sum of components due to independent rounding. LLNL-MI-410527

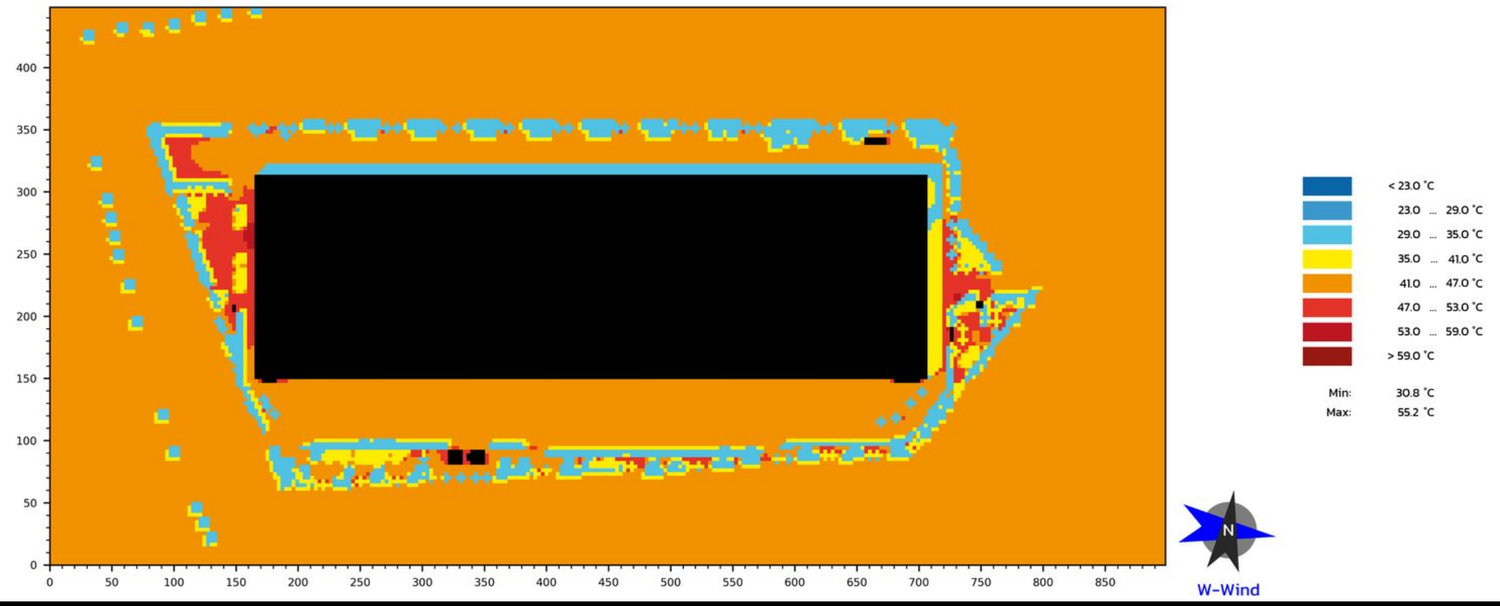
Source: Lawrence Livemore National Laboratory


ENERGIE JE VŠUDE KOLEM NÁS, STAČÍ JI VYUŽÍT



Source: NTNU

Uherce Panatonni | BEST | PET 15:00h | h = 1.50m

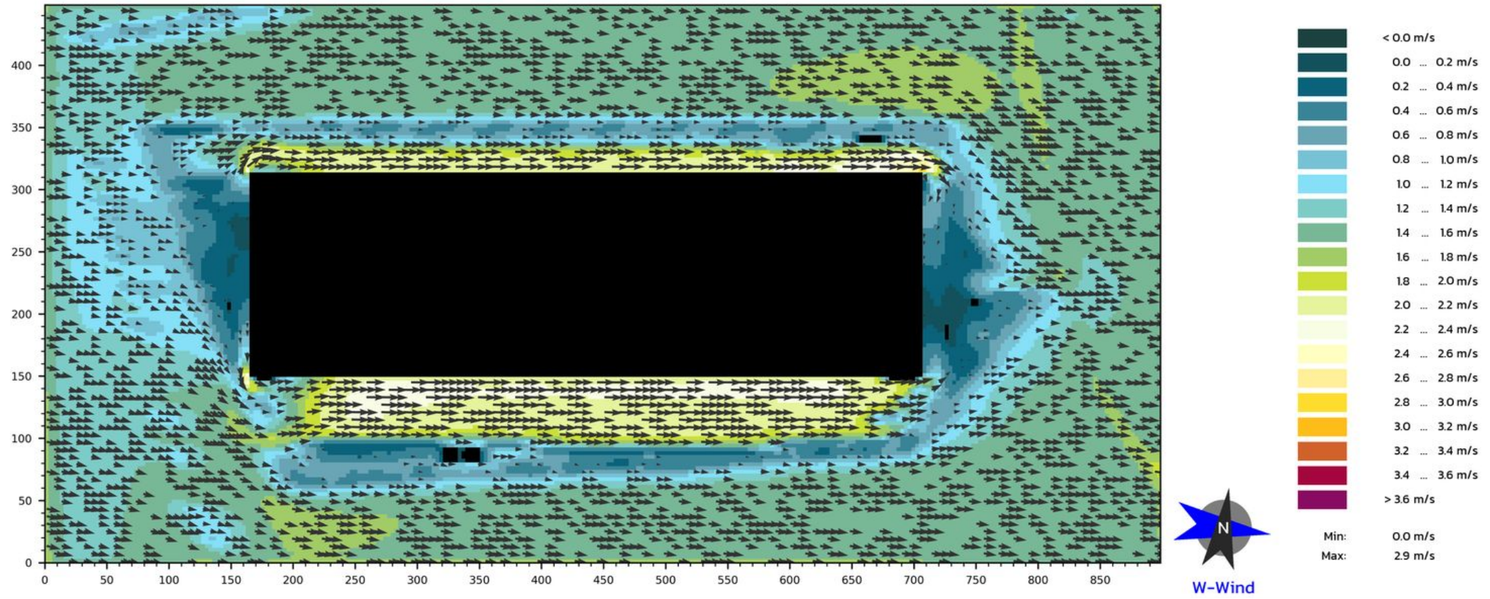


< 23.0 °C
23.0 ... 29.0 °C
29.0 ... 35.0 °C
35.0 ... 41.0 °C
41.0 ... 47.0 °C
47.0 ... 53.0 °C
53.0 ... 59.0 °C
> 59.0 °C

Min: 30.8 °C
Max: 55.2 °C

W-Wind

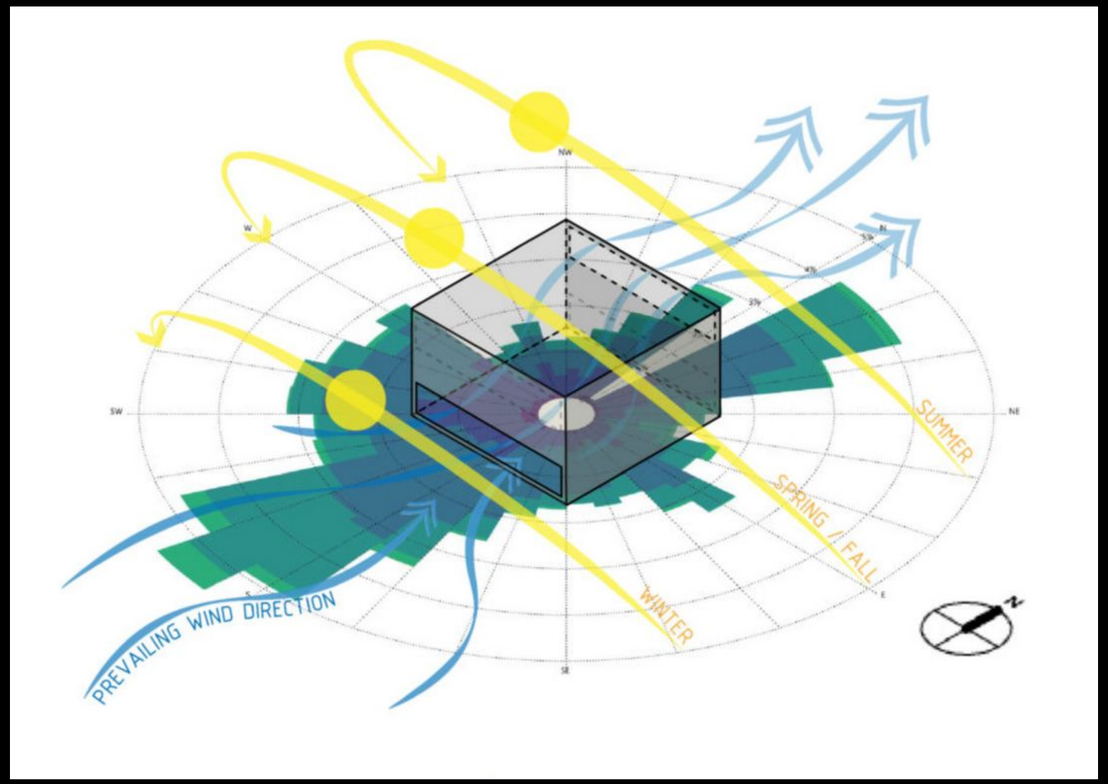
Uherce Panatonni | BEST | Windspeed 15:00h | h = 1.50m

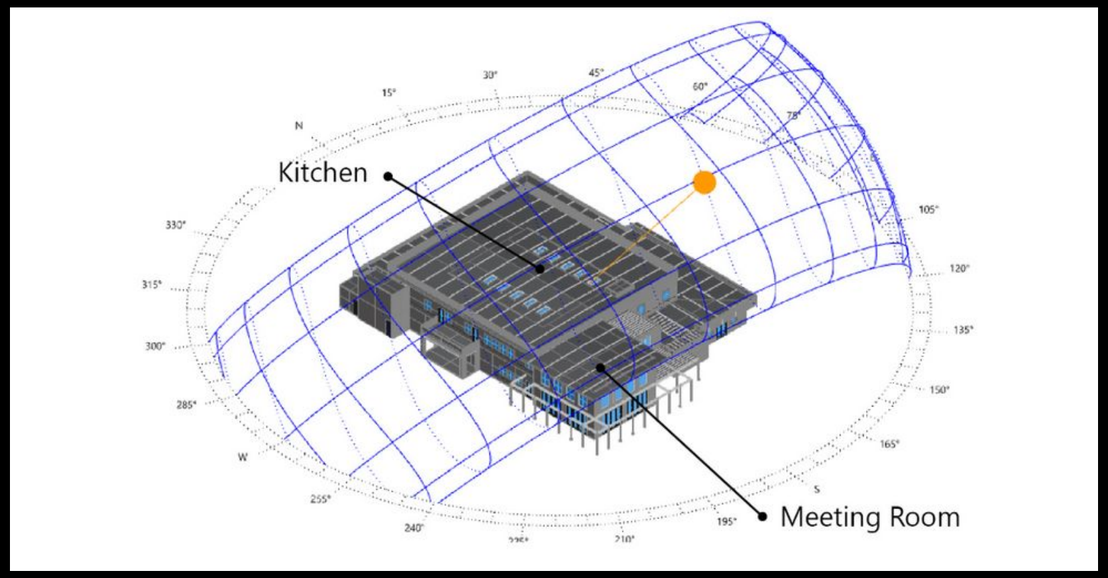


< 0.0 m/s
0.0 ... 0.2 m/s
0.2 ... 0.4 m/s
0.4 ... 0.6 m/s
0.6 ... 0.8 m/s
0.8 ... 1.0 m/s
1.0 ... 1.2 m/s
1.2 ... 1.4 m/s
1.4 ... 1.6 m/s
1.6 ... 1.8 m/s
1.8 ... 2.0 m/s
2.0 ... 2.2 m/s
2.2 ... 2.4 m/s
2.4 ... 2.6 m/s
2.6 ... 2.8 m/s
2.8 ... 3.0 m/s
3.0 ... 3.2 m/s
3.2 ... 3.4 m/s
3.4 ... 3.6 m/s
> 3.6 m/s

Min: 0.0 m/s
Max: 2.9 m/s

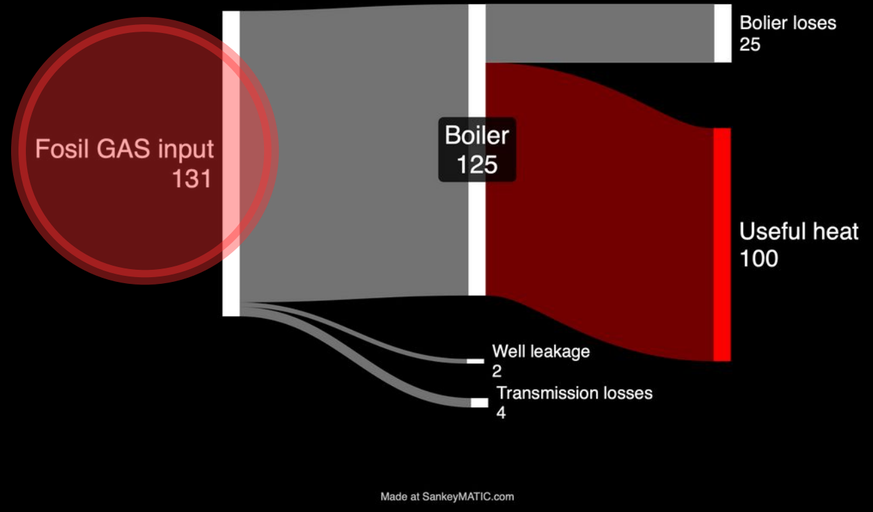
W-Wind

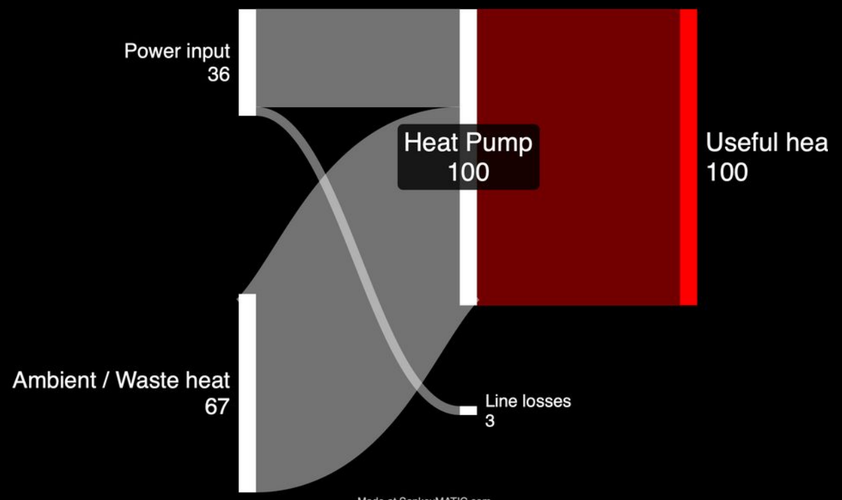


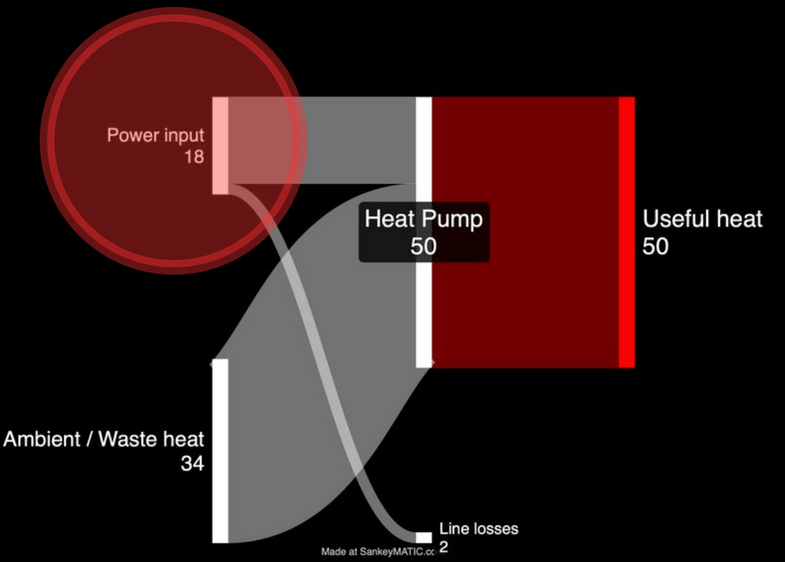


Source: IES VE

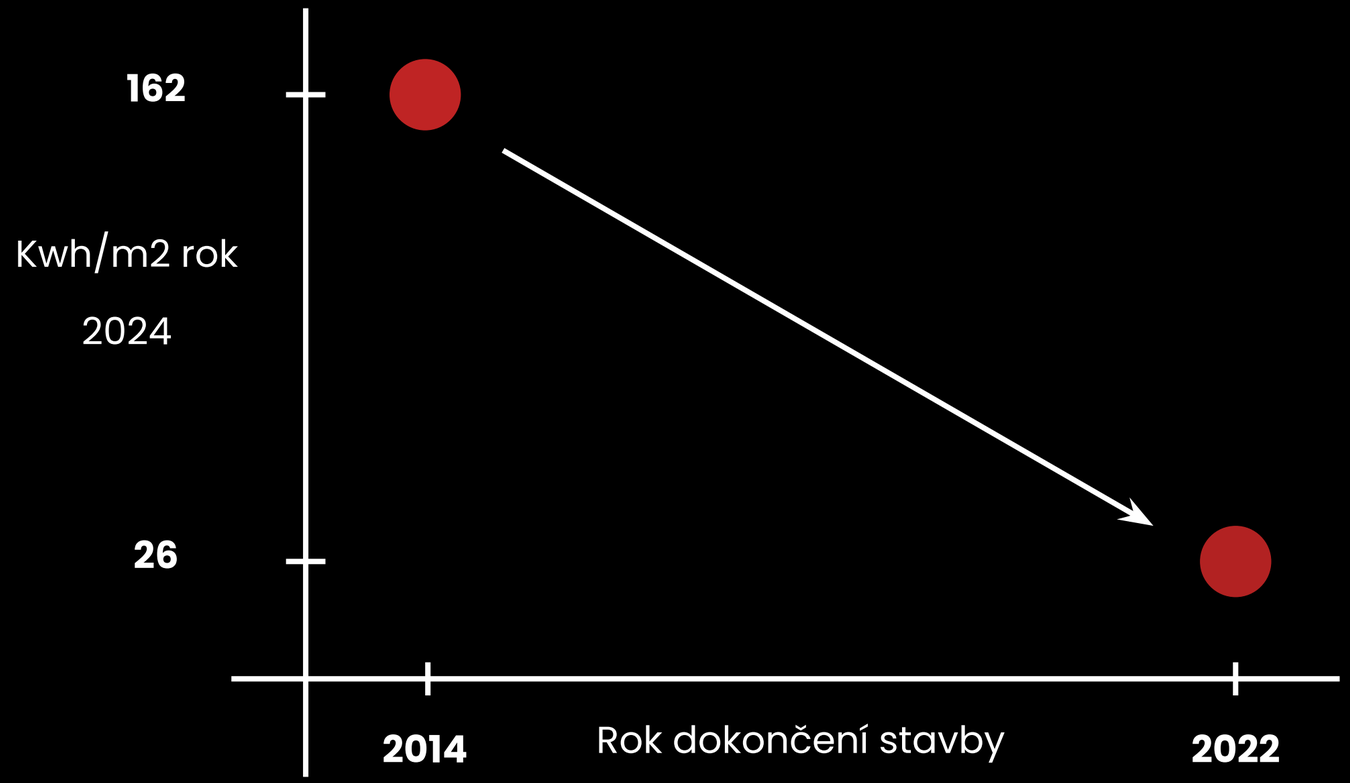
ODRŽITELNOST = EFEKTIVITA A ELEKTRIFIKACE



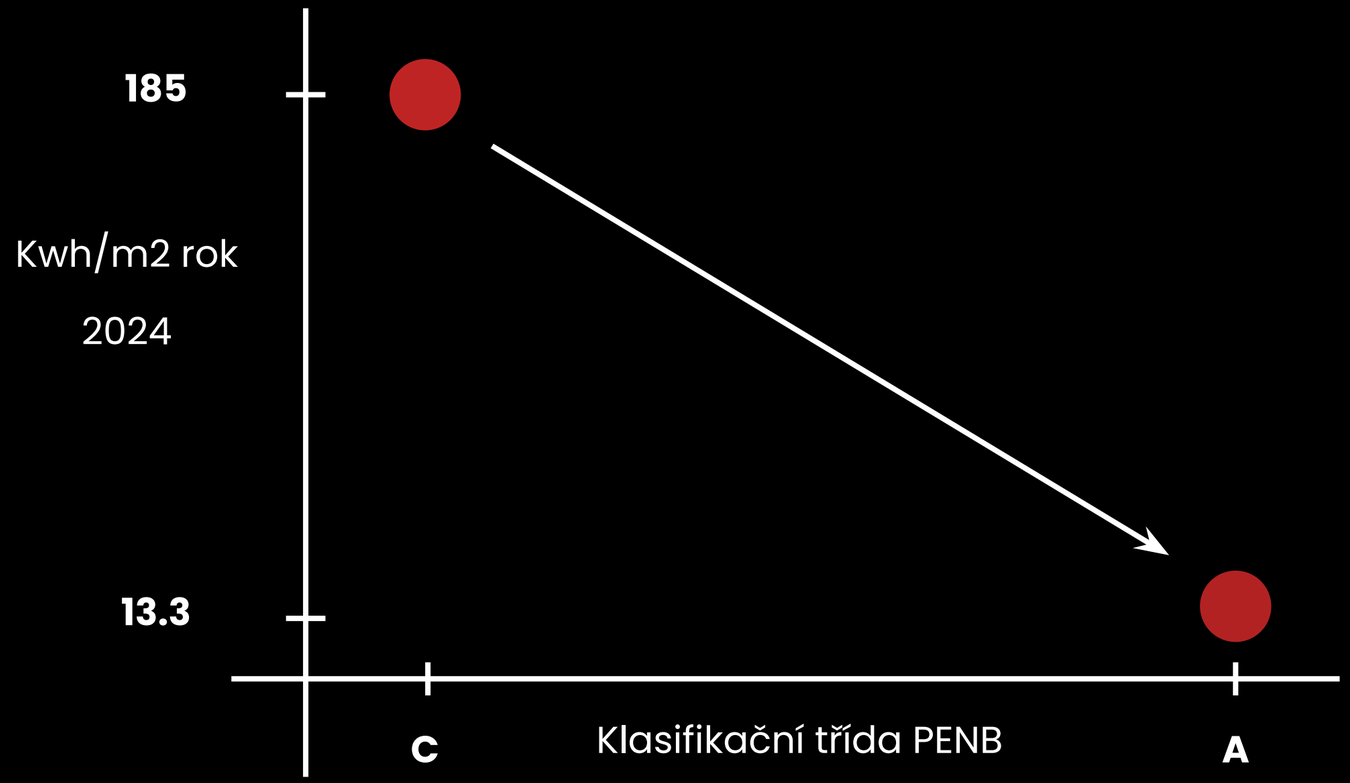




PASIVNÍ STRATEGIE A TEPLNÁ ČERPADLA



TEPELNÁ ČERPADLA A NOVÁ INSTALACE FVE



PROJEKT 20.000 BEZ FVE

VARIANTA	NÁKLADY 10 LET	ÚSPORA 10 LET
STÁVAJÍCÍ STAV	327 765 824	-
MODEL A	195 063 733	132 700 094
MODEL B	212 458 820	115 307 007
MODEL C	240 091 512	87 673 315

TEPELNÉ ČERPADLA A KOMPLEXNOST NÁVRHU

PŘESNÉ POŽADAVKY NA TEPLO A CHLAD - MODELOVÁNÍ

SYSTÉM DISTRIBUCE V BUDOVĚ

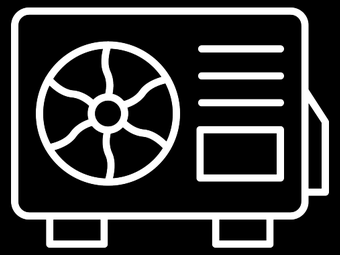
VYUŽITÍ TECHNOLOGIE KLIENTA

BMS

AKUMULACE

VZDUCH - VODA - ZEM

CHLADIVO



FVE

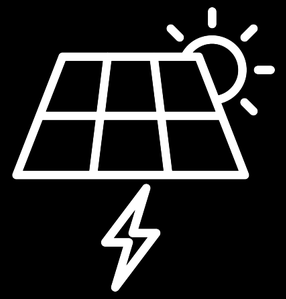
PŘESNÉ POŽADAVKY NA ENERGII - MODELOVÁNÍ

PŘIPRAVENÁ TECHNIVKÁ INFRASTRUKTURA

PODMÍNKY POJIŠŤOVNY

BMS

AKUMULACE




TRANE
AIRFINITY XL

Source: fenagy.dk

“WE SHAPE OUR BUILDINGS, THEREAFTER THEY SHAPE US.”

Pavel Fojtík