2021A2 (PERCENTAGES)

Level 1: First determine the Net AEP for each turbine. This is calculated by subtracting the loss from the Gross AEP.

$$Net\ AEP\ (kWh) = Gross\ AEP(kWh) - (Wake\ Loss * Gross\ AEP\ (kWh))$$

$$T1\ Net\ AEP = 5{,}153{,}000 - (1.2\% * 5{,}153{,}000)$$

$$T1\ Net\ AEP = 5{,}153{,}000 - 61{,}836$$

$$T1\ Net\ AEP = 5{,}091{,}164\ kWh$$

Repeat for the other two turbines.

$$T2\ Net\ AEP = 4{,}962{,}339\ kWh$$

$$T3\ Net\ AEP = 5{,}003{,}563\ kWh$$

$$Project\ Net\ AEP = T1\ Net\ AEP + T2\ Net\ AEP + T3\ Net\ AEP$$

$$Project\ Net\ AEP = 5{,}091{,}164 + 4{,}962{,}339\ + 5{,}003{,}563$$

$$Project\ Net\ AEP = 15{,}057{,}066\ kWh$$

Level 2: First, apply the monthly ratio for April to the Gross AEP to determine the gross production.

$$April\ Gross\ (kWh) = Gross\ AEP(kWh) * April\ Monthly\ Ratio$$

$$April\ Gross\ (kWh) = 5{,}153{,}000\ kWh * 10.34\%$$

$$April\ Gross\ (kWh) = 532{,}820\ kWh$$

To determine the monthly net energy production, apply each turbine's wake loss to the gross production for April.

$$T1\ April\ Net\ (kWh) = April\ Gross\ (kWh) - (April\ Gross\ (kWh) * T1\ April\ Wake\ Loss)$$

$$T1\ April\ Net\ (kWh) = 532{,}820\ (kWh) - (532{,}820\ (kWh) * 0.80\%)$$

$$T1\ April\ Net\ (kWh) = 532{,}820\ (kWh) - 4{,}263\ (kWh)$$

$$T1\ April\ Net\ (kWh) = 532{,}820\ (kWh) - 4{,}263\ (kWh)$$

$$T1\ April\ Net\ (kWh) = 528{,}557\ kWh$$

Repeat for the other two turbines. Add the Net production for the three turbines together to determine the site total.

MONTH	T1 NET (kWh)	T2 NET (kWh)	T3 NET (kWh)	SITE TOTAL NET (kWh)
Apr	528,557	518,700	509,536	1,556,793

A completed Wind for Industry project.