| Year n | actual Build cost | discounted Build cost | actual O&M cost | discounted O&M cost | discounted cumulative cost |
|---|---|---|---|---|---|
| $0.00 | $1,020.00 | $1,020.00 | $37.50 | $37.50 | $1,057.50 |
| $1.00 | 0 | $0.00 | $37.50 | $35.71 | $1,093.21 |
| $2.00 | 0 | $0.00 | $37.50 | $34.01 | $1,127.23 |
| $3.00 | 0 | $0.00 | $37.50 | $32.39 | $1,159.62 |
| $4.00 | 0 | $0.00 | $37.50 | $30.85 | $1,190.47 |
| $5.00 | 0 | $0.00 | $37.50 | $29.38 | $1,219.86 |
| $6.00 | 0 | $0.00 | $37.50 | $27.98 | $1,247.84 |
| $7.00 | 0 | $0.00 | $37.50 | $26.65 | $1,274.49 |
| $8.00 | 0 | $0.00 | $37.50 | $25.38 | $1,299.87 |
| $9.00 | 0 | $0.00 | $37.50 | $24.17 | $1,324.04 |
| $10.00 | 0 | $0.00 | $37.50 | $23.02 | $1,347.07 |
| $11.00 | 0 | $0.00 | $37.50 | $21.93 | $1,368.99 |
| $12.00 | 0 | $0.00 | $37.50 | $20.88 | $1,389.87 |
| $13.00 | 0 | $0.00 | $37.50 | $19.89 | $1,409.76 |
| $14.00 | 0 | $0.00 | $37.50 | $18.94 | $1,428.70 |
| $15.00 | 235 | $113.04 | $37.50 | $18.04 | $1,559.78 |
| $16.00 | 0 | $0.00 | $37.50 | $17.18 | $1,576.96 |
| $17.00 | 0 | $0.00 | $37.50 | $16.36 | $1,593.32 |
| $18.00 | 0 | $0.00 | $37.50 | $15.58 | $1,608.90 |
| $19.00 | 0 | $0.00 | $37.50 | $14.84 | $1,623.74 |
| $20.00 | 0 | $0.00 | $37.50 | $14.13 | $1,637.87 |
| $21.00 | 0 | $0.00 | $37.50 | $13.46 | $1,651.33 |
| $22.00 | 0 | $0.00 | $37.50 | $12.82 | $1,664.15 |
| $23.00 | 0 | $0.00 | $37.50 | $12.21 | $1,676.36 |
| $24.00 | 0 | $0.00 | $37.50 | $11.63 | $1,687.99 |
| $25.00 | 0 | $0.00 | $37.50 | $11.07 | $1,699.06 |
| $26.00 | 0 | $0.00 | $37.50 | $10.55 | $1,709.61 |
| $27.00 | 0 | $0.00 | $37.50 | $10.04 | $1,719.65 |
| $28.00 | 0 | $0.00 | $37.50 | $9.57 | $1,729.22 |
| $29.00 | 0 | $0.00 | $37.50 | $9.11 | $1,738.33 |
| $30.00 | 480 | $111.06 | $37.50 | $8.68 | $1,858.07 |
| $31.00 | 0 | $0.00 | $37.50 | $8.26 | $1,866.33 |
| $32.00 | 0 | $0.00 | $37.50 | $7.87 | $1,874.20 |
| $33.00 | 0 | $0.00 | $37.50 | $7.50 | $1,881.70 |
| $34.00 | 0 | $0.00 | $37.50 | $7.14 | $1,888.83 |
| $35.00 | 0 | $0.00 | $37.50 | $6.80 | $1,895.63 |
| $36.00 | 0 | $0.00 | $37.50 | $6.47 | $1,902.11 |
| $37.00 | 0 | $0.00 | $37.50 | $6.17 | $1,908.27 |
| $38.00 | 0 | $0.00 | $37.50 | $5.87 | $1,914.15 |
| $39.00 | 0 | $0.00 | $37.50 | $5.59 | $1,919.74 |
| $40.00 | 0 | $0.00 | $37.50 | $5.33 | $1,925.07 |
| $41.00 | 0 | $0.00 | $37.50 | $5.07 | $1,930.14 |
| $42.00 | 0 | $0.00 | $37.50 | $4.83 | $1,934.97 |
| $43.00 | 0 | $0.00 | $37.50 | $4.60 | $1,939.57 |
| $44.00 | 0 | $0.00 | $37.50 | $4.38 | $1,943.95 |
| $45.00 | 235 | $26.15 | $37.50 | $4.17 | $1,974.28 |
| $46.00 | 0 | $0.00 | $37.50 | $3.97 | $1,978.26 |
| $47.00 | 0 | $0.00 | $37.50 | $3.79 | $1,982.04 |
| $48.00 | 0 | $0.00 | $37.50 | $3.61 | $1,985.65 |

| | | | | | |
|---|---|---|---|---|---|
| $49.00 | 0 | $0.00 | $37.50 | $3.43 | $1,989.08 |
| $50.00 | 0 | $0.00 | $37.50 | $3.27 | $1,992.35 |
| Decommission = 1% | $1,970.00 | $171.79 | | | $2,164.14 |

All values are in units of $ /kW

Energy source is Onshore wind

Assumed discount rate is 5% /yr

Levelized cost of Power = $2,164.14 $ /kW

Capacity Factor = 37.9%

Levelized Cost of Energy – LCOE = $2164.14 ÷ 166.002 $13.04 /MWh

| | Actual Build cost | Discounted Build cost | Actual O&M cost | Discounted O&M cost | Cumulative cost | Yearly energy |
|---|---|---|---|---|---|---|
| Year **n** | $1,960 /kW | | | | | **average** |
| | $1,960 | $1,960.00 | $80.00 | $80.00 | $2,040.00 | 2.505 |
| 1 | 0 | 0 | $80.00 | $78.43 | $2,118.43 | 2.505 |
| 2 | 0 | 0 | $80.00 | $76.89 | $2,195.32 | 2.505 |
| 3 | 0 | 0 | $80.00 | $75.39 | $2,270.71 | 2.505 |
| 4 | 0 | 0 | $80.00 | $73.91 | $2,344.62 | 2.505 |
| 5 | 0 | 0 | $80.00 | $72.46 | $2,417.08 | 2.505 |
| 6 | 0 | 0 | $80.00 | $71.04 | $2,488.11 | 2.505 |
| 7 | 0 | 0 | $80.00 | $69.64 | $2,557.76 | 2.505 |
| 8 | 0 | 0 | $80.00 | $68.28 | $2,626.04 | 2.505 |
| 9 | 0 | 0 | $80.00 | $66.94 | $2,692.98 | 2.505 |
| 10 | 0 | 0 | $80.00 | $65.63 | $2,758.61 | 2.505 |
| 11 | 0 | 0 | $80.00 | $64.34 | $2,822.95 | 2.505 |
| 12 | 176.40 | $139.09 | $80.00 | $63.08 | $3,025.12 | 2.505 |
| 13 | 0 | 0 | $80.00 | $61.84 | $3,086.96 | 2.505 |
| 14 | 0 | 0 | $80.00 | $60.63 | $3,147.59 | 2.505 |
| 15 | 0 | 0 | $80.00 | $59.44 | $3,207.03 | 2.505 |
| 16 | 0 | 0 | $80.00 | $58.28 | $3,265.31 | 2.505 |
| 17 | 0 | 0 | $80.00 | $57.13 | $3,322.44 | 2.505 |
| 18 | 0 | 0 | $80.00 | $56.01 | $3,378.45 | 2.505 |
| 19 | 0 | 0 | $80.00 | $54.91 | $3,433.37 | 2.505 |
| 20 | $607.60 | $408.90 | $80.00 | $53.84 | $3,896.10 | 2.505 |
| 21 | 0 | 0 | $80.00 | $52.78 | $3,948.88 | 2.505 |
| 22 | 0 | 0 | $80.00 | $51.75 | $4,000.63 | 2.505 |
| 23 | 0 | 0 | $80.00 | $50.73 | $4,051.36 | 2.505 |
| 24 | $176.40 | $109.67 | $80.00 | $49.74 | $4,210.77 | 2.505 |
| 25 | 0 | 0 | $80.00 | $48.76 | $4,259.54 | 2.505 |
| 26 | 0 | 0 | $80.00 | $47.81 | $4,307.34 | 2.505 |
| 27 | 0 | 0 | $80.00 | $46.87 | $4,354.21 | 2.505 |
| 28 | 0 | 0 | $80.00 | $45.95 | $4,400.16 | 2.505 |
| 29 | 0 | 0 | $80.00 | $45.05 | $4,445.21 | 2.505 |
| 30 | $1,254.40 | $692.52 | $80.00 | $44.17 | $5,181.89 | 2.505 |
| 31 | 0 | 0 | $80.00 | $43.30 | $5,225.19 | 2.505 |
| 32 | 0 | 0 | $80.00 | $42.45 | $5,267.64 | 2.505 |
| 33 | 0 | 0 | $80.00 | $41.62 | $5,309.26 | 2.505 |
| 34 | 0 | 0 | $80.00 | $40.80 | $5,350.06 | 2.505 |
| 35 | 0 | 0 | $80.00 | $40.00 | $5,390.07 | 2.505 |
| 36 | 0 | 0 | $80.00 | $39.22 | $5,429.28 | 2.505 |
| 37 | 0 | 0 | $80.00 | $38.45 | $5,467.73 | 2.505 |
| 38 | 0 | 0 | $80.00 | $37.69 | $5,505.43 | 2.505 |
| 39 | 0 | 0 | $80.00 | $36.96 | $5,542.38 | 2.505 |
| 40 | 0 | 0 | $80.00 | $36.23 | $5,578.62 | 2.505 |
| 41 | 0 | 0 | $80.00 | $35.52 | $5,614.14 | 2.505 |
| 42 | $176.40 | $76.79 | $80.00 | $34.82 | $5,725.75 | 2.505 |
| 43 | 0 | 0 | $80.00 | $34.14 | $5,759.89 | 2.505 |
| 44 | 0 | 0 | $80.00 | $33.47 | $5,793.36 | 2.505 |
| 45 | 0 | 0 | $80.00 | $32.82 | $5,826.18 | 2.505 |
| 46 | 0 | 0 | $80.00 | $32.17 | $5,858.35 | 2.505 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 47 | 0 | 0 | $80.00 | $31.54 | $5,889.89 | 2.505 |
| 48 | 0 | 0 | $80.00 | $30.92 | $5,920.81 | 2.505 |
| 49 | 0 | 0 | $80.00 | $30.32 | $5,951.13 | 2.505 |
| 50 | $607.60 | $225.74 | $80.00 | $29.72 | $6,206.59 | 2.505 |
| 51 | 0 | 0 | $80.00 | $29.14 | $6,235.73 | 2.505 |
| 52 | 0 | 0 | $80.00 | $28.57 | $6,264.30 | 2.505 |
| 53 | 0 | 0 | $80.00 | $28.01 | $6,292.31 | 2.505 |
| 54 | $176.40 | $60.55 | $80.00 | $27.46 | $6,380.31 | 2.505 |
| 55 | 0 | 0 | $80.00 | $26.92 | $6,407.23 | 2.505 |
| 56 | 0 | 0 | $80.00 | $26.39 | $6,433.63 | 2.505 |
| 57 | 0 | 0 | $80.00 | $25.87 | $6,459.50 | 2.505 |
| 58 | 0 | 0 | $80.00 | $25.37 | $6,484.87 | 2.505 |
| 59 | 0 | 0 | $80.00 | $24.87 | $6,509.74 | 2.505 |
| 60 | 0 | 0 | $80.00 | $24.38 | $6,534.12 | 2.505 |
| Total BLDG cost | $5,135.20 | Replacements performed | | Actual lifetime energy (MWh) | | 152.83 |
| Decom = 2% | $102.70 | | | | | |
| | | | Levelized Cost of Power ($ /kW) | | $6,636.83 | include decom |

**All the above values are in units of $ /kW**

| | |
|---|---|
| Levelized Cost of Energy – LCOE ($ /MWh) | **$74.08** Leve |

| | | | |
|---|---|---|---|
| | | | discoun |
| Source is OnShore Wind w/ CF = 28.6% | 0.286 | 2.505 | average yearly energy |
| Assumed discount rate is 2% /year | | | |
| Levelized Cost of Power in $ /kW units | $6,636.83 | from Column F above, after year 60 | |
| Conversion factor from Power to Actual Energy | 0.006652404 | for CF = 0.286 | Conversion = 1 ÷ (CF x 8760 h /yr x 60 |
| **Levelized Cost of Energy** | **$74.08 /MWh** | | **LCOE** |

| Discounted yearly energy | Remarks |
|---|---|
| in MWh | **Off Shore Wind @2%** |
| 2.505 | Construction |
| 2.456 | completed |
| 2.408 | In 1 year |
| 2.361 | |
| 2.315 | Total CAPEX = $1,960 /kW |
| 2.269 | |
| 2.225 | Columns A through F |
| 2.181 | are nominal dollars |
| 2.138 | per kilowatt |
| 2.096 | of peak generating |
| 2.055 | capacity |
| 2.015 | |
| 1.975 | Replace AC converter 9% |
| 1.937 | |
| 1.899 | |
| 1.862 | |
| 1.825 | |
| 1.789 | |
| 1.754 | |
| 1.720 | |
| 1.686 | Replace blades 31% |
| 1.653 | |
| 1.621 | |
| 1.589 | |
| 1.558 | Replace AC converter 9% |
| 1.527 | |
| 1.497 | |
| 1.468 | |
| 1.439 | |
| 1.411 | |
| 1.383 | Replace all hardware = 64% |
| 1.356 | gearbox + generator + transformer, |
| 1.329 | converter & blades |
| 1.303 | 24% + 9% + 31% = 64% |
| 1.278 | |
| 1.253 | |
| 1.228 | |
| 1.204 | |
| 1.180 | |
| 1.157 | |
| 1.135 | |
| 1.112 | |
| 1.091 | Replace AC converter 9% |
| 1.069 | |
| 1.048 | |
| 1.028 | |
| 1.008 | |

| | |
|---|---|
| 0.988 | |
| 0.968 | |
| 0.949 | |
| 0.931 | Replace blades 31% |
| 0.913 | |
| 0.895 | |
| 0.877 | |
| 0.860 | Replace AC converter 9% |
| 0.843 | |
| 0.827 | |
| 0.810 | |
| 0.794 | |
| 0.779 | |
| 0.764 | |
| 89.59 | Discounted lifetime energy (MWh) |

mission from column A

lized cost of power

divided by

ted lifetime energy

yrs /1000 kW per MW)