



# Wind repower – 80/20 analysis and valuation



## Introduction

KPMG LLP's (KPMG) Valuation and Business Modeling Services and Tax Credit and Energy Advisory Services practices have created a valuation analysis to support wind energy developers and investors with their repower due diligence projects. The information presented below is a brief overview of the methodology and project structure that has been developed through our prior experience with repower projects. The objective of the analysis is to estimate the fair market value (FMV) of the wind project and present the 80/20 ratio as described in IRS Notice 2016-31.

## Methodology overview

KPMG uses a combination of the income and cost approaches to execute the 80/20 valuation. The income approach sets the value of the overall project based on the project's achievable cash flows under the assumption that the plant is not repowered. Next, any above- or below-market power purchase agreements (PPAs) are quantified and netted against the overall project value to get to indicated property, plant, and equipment (PP&E) value. KPMG then allocates that indicated PP&E value to the individual components at the project based on a cost approach, which considers the relative cost to replace each of the individual components of the project and any physical depreciation on the components based on their useful lives. Gearboxes typically have very little value 10 years into a project's life. The foundations and towers retain the most relative value.

KPMG also considers any economic obsolescence in the assets based on the results of the income approach. Once each of the components is assigned a piece of the relative fair value of the project, KPMG adds up the FMV for any of the components that will be retained after a repower (the Used Property). Site infrastructure outside of the turbine island such as transmission lines, admin buildings, roads, and civil work are excluded from the Used Property based on our interpretation of IRC S.45 and IRS Notice 2016-31. The Used Property value then feeds into the 80/20 fraction, where the numerator is the Used Property FMV and the denominator is the Used Property FMV plus the repower CapEx (the estimated capitalized cost of the repower). This repower CapEx includes the cost of the turbine repower kit, any balance of plant (BOP) equipment, installation/EPC costs, financing and insurance costs, etc. The repower CapEx value is provided by the client and then KPMG adjusts it down for any noneligible costs based on advice from our Tax Credits and Energy Advisory group in our Washington National Tax office.

KPMG typically sees discounted cash flows (DCF) based on a total project life between 30 and 35 years. Some of the market data we consider is published from SNL, Ventyx, WoodMackenzie/GTM, Carbone, BNEF, etc.

## Typical project structure

**Phase I 80/20 analysis** – Includes a prospective valuation of the project as of the repower commercial operations date (COD) as well as a presentation of the 80/20 ratio. The valuation is based on cash flows that assume the plant is not repowered. Deliverables include draft schedules and a narrative report.

**Phase II 80/20 analysis** – Includes an update of the prospective valuation and 80/20 ratio utilizing an updated financial model and CapEx budget that is current as of financial close. The updated schedules and narrative report will be reviewed and finalized.

**Postrepower valuation pricing analysis** – Includes a prospective valuation of the project as of the repower COD that is based on cash flows that assume the plant has been repowered and new production tax credits (PTC) have been awarded. Deliverables include draft schedules and a narrative report. The valuation is typically required for the newly formed partnership that holds the repowered asset.

## Data items typically required

1. Financial model based on nonrepowered revenue, O&M, net capacity factor, etc.
2. Estimate of repower CapEx budget that includes as much detail as is currently available (turbine costs, BOP costs, installation/EPC costs, financing/tax/other costs). This will evolve as you get closer to the COD.
3. Independent engineer's report.
4. PPA summary, if applicable.
5. Project overview or summary document.
6. KPMG would complete a site inspection to gather additional technical details on the project to support the valuation.

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