




## 2017 Deloitte Renewable Energy Seminar

Innovating for tomorrow

November 13-15, 2017

Deloitte Center *for*  
Energy Solutions



Useful lives  
and asset  
repowering to  
qualify for tax  
credits

Brian Americus, Senior Manager, Deloitte Tax LLP

Peter Hannagan, Senior Manager, Deloitte Transactions and Business Analytics LLP

Allison Taylor, Senior Manager, Deloitte & Touche LLP

Joe Zenk, Managing Director, Deloitte Transactions and Business Analytics LLP

# Contents

Overview of opportunities for repowering assets	4
Repowering case study	9
Potential tax issues related to repowering assets	13
Valuation considerations for 80/20 rule for repowering assets	15
Other considerations	17

# Overview of opportunities for repowering assets

# Opportunity

- Owners of wind energy facilities have the opportunity to repower wind farms that are past or approaching the end of their 10-year production tax credit (“PTC”) period.
- Repowering involves replacing components of wind turbine generators with new technology resulting in increased output and efficiencies.
- Facilities are considered placed in service anew, restarting the 10-year PTC period if the cost of the new property is 80% or more of the sum of the cost of the new property and the fair market value of the used property.

Owners of Wind Energy have an opportunity to repower wind turbine generators to take advantage of increased efficiencies and the federal renewable electricity production tax credit.

# Background and benefit

## Tax Extender Acts

- On December 18, 2015, President Obama signed into law the Protecting Americans from Tax Hikes (“PATH”) Act of 2015 and the Consolidated Appropriations Act of 2015 (together the “Tax Extenders”).
- The Tax Extenders extended the PTC for five years for wind facilities with construction begun before January 1, 2020.
- The value of credit for wind facilities that commenced construction by December 31, 2016 is 100%; thereafter, value of credit phases down 20% each year through the end of 2019.

# Background and benefit

## PTC

- Enacted in 1992, the PTC is an inflation-adjusted per-kilowatt-hour credit for electricity generation.
- Applying the inflation-adjustment factor for the 2016 calendar year, the production tax credit amount is as follows:
  - \$0.023/kWh for wind, closed-loop biomass, geothermal energy resources, and solar systems that have not claimed the Investment Tax Credit
  - \$0.012/kWh for open-loop biomass, landfill gas, municipal solid waste, qualified hydroelectric, and marine and hydrokinetic energy resources
- Applying the inflation-adjustment factor for the 2017 calendar year, the PTC amount is as follows:
  - \$0.024/kWh for wind, closed-loop biomass, geothermal energy resources, and solar systems that have not claimed the Investment Tax Credit
  - \$0.012/kWh for open-loop biomass, landfill gas, municipal solid waste, qualified hydroelectric, and marine and hydrokinetic energy resources
- The exact amount of the PTC for the tax years 2018-2019 will depend on the inflation-adjustment factor (and rounding) used by the IRS in the respective tax years

# Background and benefit

## 80/20 Rule

- Taxpayers must compare cost of new property to the sum of the cost of the new property and the value of used property to remain at the facility.
- Issued in December 2016, IRS Notice 2017-04 clarified that for purposes of repowering and the 80/20 rule, the cost of new property includes all costs properly included in the depreciable basis of the new property.
- Each wind turbine generator with its tower and supporting pad is a separate qualified facility for purposes of IRC section 45 (d)(1), based on IRS guidance including Rev. Rul. 94-31.



# Repowering case study

## Repowering case study

Wind Developer is considering repowering a wind project originally placed in service in 2007 with 100 wind turbine generators (“WTGs”)

- 10-year production tax credit (“PTC”) period has just expired
- Wind Developer purchases new equipment for each WTG including a larger rotor and new controller
  - Additional costs are incurred to remove the existing rotor and controller for each WTG
  - The remainder of each WTG (pad, tower, nacelle, etc.) and balance of plant equipment (transformer, etc.) will be retained
  - The repowering project will result in increased electricity production
- Cost of the new components including installation is \$50 million
  - Wind Developer paid \$7 million for and took delivery of some of the rotors and controllers in December of 2016

# Repowering case study

1. What is the “facility” under IRC section 45(d)(1) for purposes of the PTC and 80/20 Test?
  - Rev. Rul. 94-31; Notice 2016-31; Notice 2017-04
  - Balance of plant / shared property?
  - Pad-mounted transformers?
2. What is the “cost of new property” for calculating the 80/20 Test?
  - History of 80/20 Test; Notice 2017-04
  - 263A capitalized costs
    - Direct and indirect costs
  - 263(a) capitalized costs
    - Improvement, betterment, restoration
    - Removal and disposal costs

# Repowering Case Study

3. How is the value of “used property” determined for calculating the 80/20 Test?
  - Impact of valuation methodology on above fact pattern
    - Cost approach
    - Income approach
    - Market approach
  - CCA 200347024
  - Marketplace / IRS scrutiny
4. How is the Begun Construction Requirement satisfied when using the 5% Safe Harbor?
  - Single project election vs. each facility
  - Total cost of the facility
  - Physical Work Test

# Potential tax issues related to repowering assets

# Potential tax issues

- How to value the used property
- Identifying expenditures allocable to each new qualified facility inclusive of all allocable costs to be capitalized under IRC sections 263A and 263(a)
- Method of accounting and elections for dispositions and removal costs

# Valuation considerations for 80/20 rule for repowering assets

# Valuation considerations for 80/20 rule for repowering assets

- The income approach is used to estimate the wind farm value related to cash flows, contracts, and the spot market
- The cost approach is used to:
  - Estimate the replacement cost new ("RCN") less depreciation of all the assets of the wind farm (WTGs, roads, collection system, etc.), giving special consideration to obsolescence (physical, functional, and economic)
  - Cost approach of the wind farm and qualified facilities should represent the existing plant and wind turbine generator technology
- Estimate the Fair Market Value ("FMV") of the used property of each qualified facility to be included in the 80/20 test calculation
- Calculate the ratio of the used property FMV to the total facility FMV (sum of used property FMV and new qualified facilities) to show that it doesn't exceed 20%





# Other considerations

## Other considerations

- Assumptions used in the repowering analysis should be consistent with other parts of the business
- Consider using a specialist to assist with the valuation analysis
- Evaluate what the unit of account is for the old components being replaced
- Identify appropriate internal controls over the repowering analysis including information used in the analysis/provided to specialists



This publication contains general information only and is based on the experiences and research of Deloitte practitioners. Deloitte is not, by means of this publication, rendering business, financial, investment, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte, its affiliates, and related entities shall not be responsible for any loss sustained by any person who relies on this publication.

**About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see [www.deloitte.com/about](http://www.deloitte.com/about) for a detailed description of DTTL and its member firms. Please see [www.deloitte.com/us/about](http://www.deloitte.com/us/about) for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.