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## Workshop on Investment in U.S. Wind Industry by Chinese Companies

Beijing, China  
June 30, 2011

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### Investment in U.S. Renewable Energy Projects: Business and Legal Environments

*Presented by*  
**Edward D. Einowski**  
Partner, Stoel Rives LLP



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Stoel Rives is pleased to announce that it has received a nomination for the prestigious *USA Awards for Excellence* in **Energy Projects: Power including Renewables**, as well as *national ranking* for its **Renewables and Alternative Energy practice** from *Chambers USA* and *Chambers Global*.

**Chambers and Partners** annual rankings are a result of extensive independent research conducted among in-house counsel, corporate executives and leading attorneys.



Stoel Rives is pleased to announce that it has received a *National First-Tier* ranking for its **Energy Law practice**, an honor achieved by only a select number of law firms in the country.

The annual *U.S. News & World Report-Best Lawyers "Best Law Firms"* rankings are based on a comprehensive survey of clients, attorneys and marketing professionals. In 2010, the survey generated over 26,000 responses, including a response from every Fortune 100 company.



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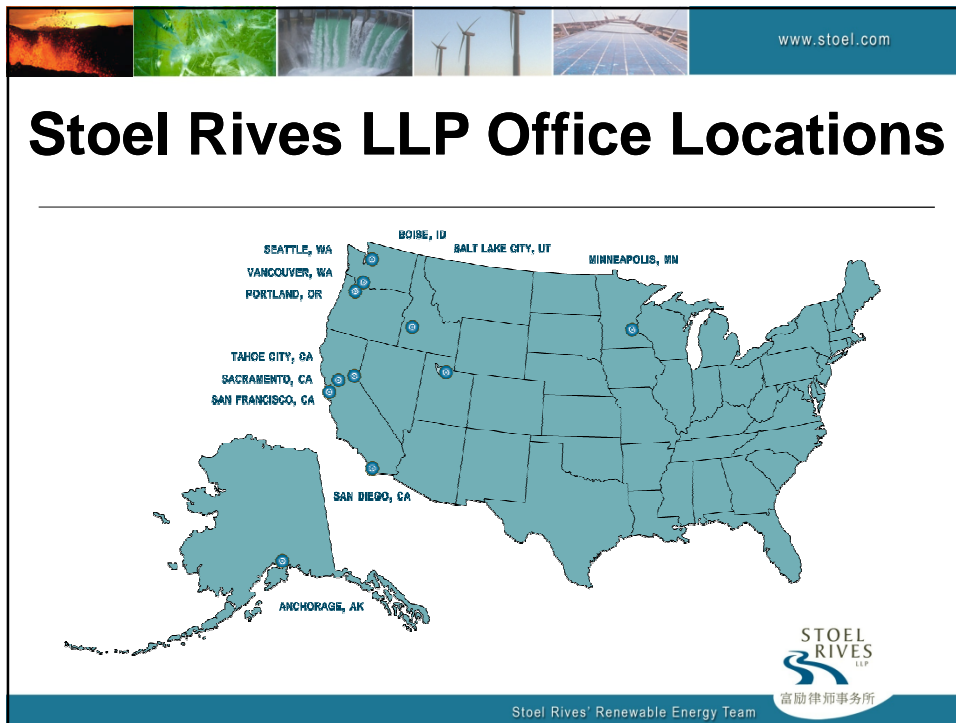
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Mr. Einowski is listed in *The Best Lawyers in America* for his finance work and *Chambers USA-America's Leading Lawyers for Business* for his work in renewable energy.



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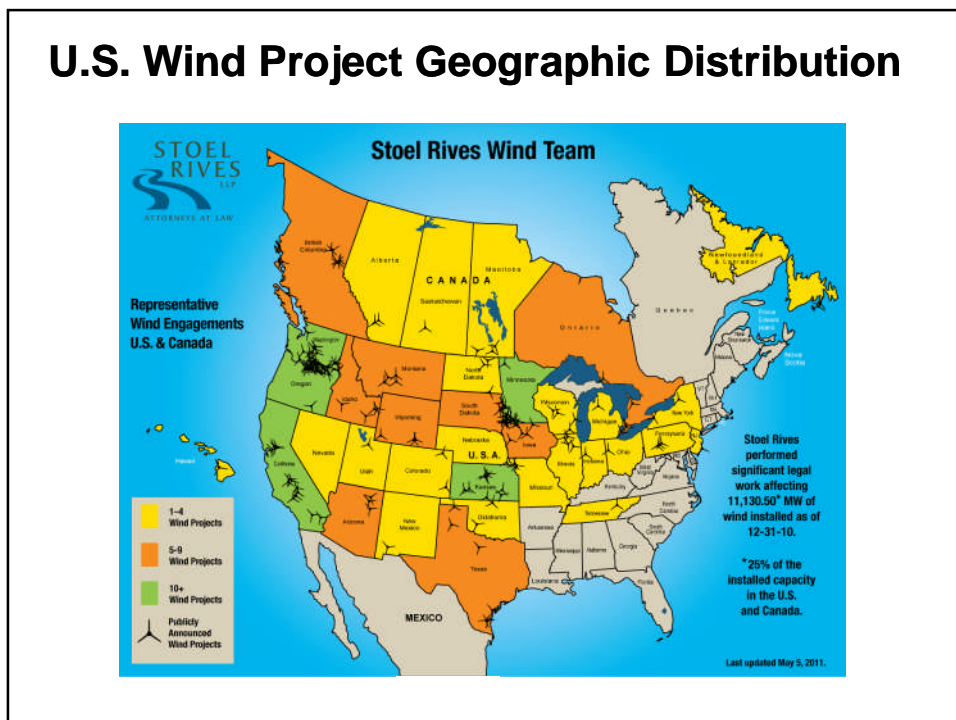
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Detailed description: This slide features a map of the United States and Alaska with blue circular markers indicating office locations. The locations are: Seattle, WA; Vancouver, WA; Portland, OR; Boise, ID; Salt Lake City, UT; Minneapolis, MN; Tampa City, FL; Sacramento, CA; San Francisco, CA; San Diego, CA; and Anchorage, AK. The slide includes the Stoel Rives LLP logo and the text 'Stoel Rives' Renewable Energy Team' and '富助律師事務所'.

## U.S. Wind Project Geographic Distribution



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Representative Wind Engagements U.S. & Canada


1-4 Wind Projects  
5-9 Wind Projects  
10+ Wind Projects  
Publicly Announced Wind Projects

Stoel Rives performed significant legal work affecting 11,130.50\* MW of wind installed as of 12-31-10.

\*25% of the installed capacity in the U.S. and Canada.

Last updated May 5, 2011.

Detailed description: This slide contains a map of the United States and Canada titled 'U.S. Wind Project Geographic Distribution'. The map is color-coded by the number of wind projects: yellow for 1-4 projects, orange for 5-9 projects, and green for 10+ projects. Wind turbine icons indicate publicly announced projects. The map shows a high concentration of projects in the central and western United States and parts of Canada. Text on the slide states that Stoel Rives performed significant legal work affecting 11,130.50\* MW of wind installed as of 12-31-10, which represents 25% of the installed capacity in the U.S. and Canada. The slide also includes the Stoel Rives LLP logo and the text 'Stoel Rives Wind Team' and 'Last updated May 5, 2011.'




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## Three Defining Characteristics of the U.S. Renewable Energy Market

- *First:* Competitive environment
  - Power companies not required to purchase electricity from any particular provider
  - Many providers of renewable energy, equipment and services
  - Extensive use of competitive bidding

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## Three Defining Characteristics of the U.S. Renewable Energy Market *(cont.)*

- ***Second:* Legal environment - over 51 legal jurisdictions**
  - The federal government
  - 50 state governments
  - Thousands of city, county and other local governments

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## Three Defining Characteristics of the U.S. Renewable Energy Market *(cont.)*

- **Third: Tax driven returns on investment**
  - Without U.S. tax appetite, cannot realize acceptable returns or sell power at competitive price
  - Places premium on arrangements with entities that can utilize U.S. tax benefits

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## Tax Driven Returns

- **Coal and natural gas fired plants dominate U.S. electric supply**
  - Utilities concerned about coal plants if carbon legislation is enacted
    - Carbon costs currently unknown
  - Benchmark prices for wind energy tend to be based on referent natural gas prices

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## Tax Driven Returns *(cont.)*

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- **High capital costs/low capacity factors = expensive wind energy**
  - Indicative comparison:
    - Capital costs of natural gas plant approximately \$2 million/MW of installed capacity at 95% capacity factor
    - Capital costs of wind project approximately \$1.9 million/MW at 32% capacity factor

  
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## Tax Driven Returns *(cont.)*

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- **Main federal tax subsidies:**
  - **Production Tax Credit (“PTC”) @ \$21.00/MWh**
  - **Investment Tax Credit (“ITC”) @ 30% of qualified costs**
  - **ITC grant @ 30% of qualified cost**
    - Set to expire on 31 December, 2011
    - Uncertain whether it will be extended and if so in what form

  
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## Tax Driven Returns *(cont.)*

- **Accelerated depreciation deduction also a key federal tax attribute**
  - Depreciation deduction can be as much as 25% of the economic value of the project
  - Congress has frequently provided “bonus depreciation” for limited periods that provide significant increases in the amount of the annual deductions
    - Increases need for large tax appetite

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## Tax Driven Returns *(cont.)*

- **Federal tax benefits require U.S. taxpayer with U.S. taxable income**
  - PTC and ITC can only be used to offset U.S. taxable income
  - Unused credits/depreciation can be carried forward
    - But this results in tax inefficiency on a present value basis

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## Tax Driven Returns *(cont.)*

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- **All federal tax subsidies (including ITC cash grant) require that project owners project be subject to U.S. taxation as corporations – “blocker corporations”**
  - The blocker corporation can be owned by a Chinese parent
  - Passive activity loss rules effectively prevent most individual investors from taking advantage of federal tax subsidies

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## Tax Driven Returns *(cont.)*

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- **Most developers and foreign companies entering U.S. markets do not have significant U.S. tax liability**
  - Wind projects tend to produce tax losses in early years due to accelerated depreciation and other deductions
  - Thus, must partner with investor with tax appetite

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## Tax Driven Returns *(cont.)*

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- **State subsidies**
  - Vary widely from state to state in both form and amount:
    - State PTCs
    - Sales tax exemptions
    - Real property tax exemptions
    - Miscellaneous grants and subsidies – e.g., Oregon Business Energy Investment Tax Credit

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## Tax Driven Returns *(cont.)*

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- **State subsidies *(cont.)***
  - Most state income tax subsidies are not valued by investors for lack of state income tax liability
    - Thus, most often are carried forward to offset state tax liability in later years of project life
  - Other state tax subsidies (e.g., sales and property tax exemptions) valued by lowering project capital or operating costs

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## Tax Driven Returns *(cont.)*

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- **Partnering with tax investor to realize value of tax subsidies**
- **Accomplished through tax equity investment transaction**

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## Tax Driven Returns *(cont.)*

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- **Structure of tax equity transaction:**
  - Investor purchases ownership interest in project company
  - Project company structured as entity taxed as a partnership for U.S. tax purposes (a “disregarded entity” or “pass-through entity”)
    - Enables investors to claim the tax benefits, which would otherwise be trapped in the project company

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## Tax Driven Returns *(cont.)*

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- **Structure of tax equity transaction *(cont.)*:**
  - Investor begins with 99% interest in project company
    - Makes cash payment to developer to buy this interest
    - Cash payment is a negotiated amount based on the discounted value of the tax benefits
    - Cash payment “monetizes” the tax benefits and brings them forward to defer project capital costs and provide initial return to developer

  
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## Tax Driven Returns *(cont.)*

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- **Structure of tax equity transaction *(cont.)*:**
  - When cumulative return to tax investor achieves a negotiated target yield based on the total value of cash and tax benefits, tax investor’s interest “flips” to lower amount
    - Usually flips from 99% to 5% (lowest % permitted)
    - Flip point can occur anywhere from year 5 (ITC and ITC grant) to year 12 or 13 (PTC)

  
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## Tax Driven Returns *(cont.)*

- **Structure of tax equity transaction *(cont.)*:**
  - Developer can have option to buy out tax investor at fair market value
    - Investor cannot have right to force a buy out
    - Insufficient experience to date to know how often developers will exercise buy out option
  - Most PTC tax equity deals are unlevered (no debt); most ITC grants are levered (project debt)

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## The Legal Environment

- 51 primary legal jurisdictions – the federal government and 50 states
- Thousands of city, county and other local governments
- Each jurisdiction has authority to make laws governing wind projects subject to its jurisdiction

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## The Legal Environment *(cont.)*

- **Federal government jurisdiction:**
  - Interstate and international commerce, including wholesale sales of electricity
  - Public welfare: environmental laws, health and safety regulations
    - Many of these federal laws are administered by the states (*e.g.*, the Environmental Protection Act)
  - Federal tax laws
    - Impact on state tax laws

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## The Legal Environment *(cont.)*

- **State government jurisdiction:**
  - Retail sales of electricity, including regulation of investor owned utilities
  - Laws establishing framework for local land use and zoning regulations
  - Licensing of contractors and service providers
  - Enforcement of federal environmental laws
  - Contract law

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## The Legal Environment *(cont.)*

- **Local government jurisdiction:**
  - Implementation of land use and zoning laws
    - State legal framework generally allows local governments wide latitude in structuring these laws
    - In many rural states (e.g., Nebraska), there are few or no local zoning or land use laws
  - Control over discretionary property tax exemptions
  - Building permits

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## The Legal Environment *(cont.)*

- **Operating in multiple states and localities:**
  - Similar over-all approach in different jurisdictions, but wide variety in the details
    - Not safe to assume that the laws will be the same from place to place, even in same state
  - License granted in one state not effective in another state

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## The Legal Environment *(cont.)*

- **Contract law: private law**
  - U.S. law sets broad bounds for legally enforceable contracts
  - Within those bounds, parties are free to agree to whatever terms they choose
  - Contracts thus reflect the “private law” agreed upon by the parties

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## The Legal Environment *(cont.)*

- **Contract law: private law *(cont.)***
  - Unlike civil law jurisdictions, most contract law is judge-made law (“Common Law”), not statutory law
    - Legislatures can and sometimes do enact statutes that change Common Law
    - But generally statutes do not dictate contract terms

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## The Legal Environment *(cont.)*

- **Contract law: private law** *(cont.)*
  - Courts generally enforce the contract as written
    - This is true even if the contract contains unfair provisions
    - Only in very limited cases where a contract violates well established principles of public policy will courts not enforce its terms

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## The Legal Environment *(cont.)*

- **Contract law: private law** *(cont.)*
  - Thus, parties have great latitude to negotiate advantageous contract terms
    - Allows great ability to experiment with different approaches to risk allocation and contract terms
  - But must live with the terms agreed upon

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## The Legal Environment *(cont.)*

- **Contract law: private law** *(cont.)*
  - **Result: major project contracts are extensively negotiated**
    - Includes PPAs, turbine supply agreements and balance of plant construction contracts
    - Time and expense of major contract negotiations must be factored into project cost and schedule

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## The Legal Environment *(cont.)*

- **Contract law: private law** *(cont.)*
  - For the most part, there are no “standard form” contracts
    - Parties usually start with widely used forms, but vary them significantly in the negotiating process
    - Each contract is tailored to the particular project and the parties’ objectives

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## The Legal Environment *(cont.)*

- **Contract law: private law *(cont.)***
  - **Terms of contracts are kept strictly confidential**
    - Makes it difficult for developers to know what the “market” is on any given contract term
    - Places a premium on use of attorneys who have extensive experience in the industry

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## The Competitive Environment

- **Power Purchase Agreements:**
  - Most awarded through competitive bidding
    - Some opportunity to do bilateral negotiations without competitive bidding
  - Limited ability to force purchase of output through PURPA due to low avoided cost price
    - Some adjustments to avoided cost to take account of the nature of wind are being considered (Idaho PUC pending PURPA tariff)

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## The Competitive Environment

*(cont.)*

- **Winning a Power Purchase Agreement:**
  - Location and other project characteristics can be important factors in decision making
  - Transmission path and constraints
    - Availability of network transmission or dynamic scheduling
    - Cost elements:
      - » System upgrade costs and OATT reimbursement mechanism
      - » Interconnection costs

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## The Competitive Environment

*(cont.)*

- **Winning a Power Purchase Agreement *(cont.)*:**
  - Renewable Energy Credits (“green tags” or “RECs”):
    - Electricity and RECs usually “bundled” and sold together
    - Qualification under applicable State Renewable Portfolio Standard
      - Some states do not give equal credit to RECs from out of state resources – subject to constitutional challenge

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## The Competitive Environment

*(cont.)*

- **Winning a Power Purchase Agreement *(cont.)*:**
  - Acceptability of turbine to output purchaser
    - Proven reliability in U.S. applications
      - Issues with an aging grid with older equipment compared to that used in many rising economies
    - Insulation from patent and intellectual property infringement claims
    - Experience of operations and maintenance service provider

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## The Competitive Environment

*(cont.)*

- **Winning a Power Purchase Agreement *(cont.)*:**
  - Seller's creditworthiness
    - Ability to post collateral or provide parent guarantee
  - Seller's track record
    - Number of projects in operation in U.S.
    - Number of projects in operation in other countries

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## The Competitive Environment

*(cont.)*

The most important factor in winning a  
Power Purchase Agreement:

**The Delivered Cost:**  
The “all in” cost - Price for the Electricity  
and RECs plus transmission costs

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## The Competitive Environment

*(cont.)*

- The price competition environment varies by geographic location:
  - High capacity factor yields lower price
    - Highest capacity factors tend to be in the Central Midwestern States (Iowa, Nebraska, Oklahoma, Kansas)
      - However, these states are remote from load and thus can result in significantly higher transmission costs
  - Costs of permitting
    - Higher in California and densely populated East Coast States

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## The Competitive Environment

*(cont.)*

- **The price competition environment varies by geographic location *(cont.)*:**
  - **General price recent price levels in different locations (bundled energy and REC prices):**
    - **California: +/- \$95.00/MWh**
    - **Central Midwest: +/- \$38.00/MWh**
    - **East Coast: +/- \$105.00/MWh**

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## The Competitive Environment

*(cont.)*

- **No transparent pricing information:**
  - Terms of all power purchase agreements are strictly confidential - not publicly disclosed
  - Publicly quoted forward price indices based on extrapolation from spot market prices, not actual long-term prices
  - Many simply price to a desired rate of return based on costs and project characteristics

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## The Competitive Environment

*(cont.)*

- **Key elements of competitive pricing:**
  - Capacity factor
  - Turbine price (80% of total project costs)
  - Performance of turbines at project site
  - Costs of balance of plant
  - Interconnection costs
  - Cost of posting collateral

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## The Competitive Environment

*(cont.)*

- **Key elements of competitive pricing *(cont.)*:**
  - Risk allocation under PPA:
    - Delay liquidated damages
    - Allocation of curtailment risk
    - Output guarantees and liquidated performance damages
  - Ability to efficiently monetize/use tax subsidies

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