

# Qualifying Wind Energy Developers for Awarding Wind Energy Construction License

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# The Dilemma

- Who is worthy of license?
  - Large conglomerate
  - Startup
- What should be the process?
  - First-come-first-serve
  - Competition
- What about cost of generation?
  - Lowest cost
  - Reasonable cost



# The Goal

- Prevent speculators from acquiring licenses
- Prevent organizations from acquiring licenses that are financially insolvent and/or organizations that do not have demonstrable financial capability to invest in a wind farm project
- Prevent companies from deploying projects with lower quality, uncertified and cheaper wind turbines and related equipment.
- Encourage financially capable companies to bid for licenses
- Allocate resources to serious projects:
  - Location/Land
  - Transmission capacity

# Criteria for Qualifying Wind Energy Projects/Developers

1. Issue construction license only after developer has spent resources on doing all the necessary preparatory work to take a project from concept stage to feasibility
  - Issue a provisional license to do preparatory work, with strict conditions for performance
  - Assumption: Only the serious developers will endure rigorous preparatory work



# Criteria for Qualifying Wind Energy Projects/Developers

2. Issue licenses with a performance bond:  
Require developer to deposit significant amount of money, with a link between reaching milestones and refund of deposit
  - Assumption: Only the serious developers will deposit significant amount of money, which is forfeited if the license conditions pertaining to achieving milestones are not met



# Criteria for Qualifying Wind Energy Projects/Developers

3. Issue licenses to organizations with a strong balance sheet.
  - Example criterion: Balance sheet is able to support 50% equity stake in the wind project
  - Assumption: Only the financially capable developers will qualify



# 1a. Provisional License

- A best practice is to award provisional license to a developer in order to perform the preparatory work, and to award a construction license based on an expert evaluation of the completed preparatory work
  - An overall expiry period (2 to 3 years)
  - Revocation of PL for not achieving milestones within deadlines.
    - Examples of milestones include, deployment of at least 50m met-tower within 9 months of issue of provisional license.
  - Strict conditions for renewal of the provisional license, in case developer is unable to meet milestones
  - Performance bond, which is deposit of 10 to 25% of the cost of development work
    - The amount of performance bond is returned to the developer upon completion of the proposed preparatory work within the specified timeframe. Amount is forfeited for non-performance

## 1b. Construction License

Issue a final construction license after developer has invested in performing all the preparatory work:

- Wind measurements for at least one year with met-mast of height 50 meters or higher
- Wind resource assessment
  - The result of the WRA must be in the acceptable range. The result is typically expressed in terms of P50, P90 and P95 net plant capacity factor.
- Land lease or land purchase agreement
- Preliminary interconnection agreement
- Basic environmental assessment (avian, wildlife, visual impact, noise and others) with a determination that there are no critical issues with the proposed site
- Overall wind farm design that contains:
  - Certified Wind turbine generator, total capacity of wind farm
  - Layout turbines, Balance of plant
  - Project plan for various activities



## 1b. Construction License, Contd.

- Financial plan with:
  - Economics of wind farm
  - Commitment from equity and debt financiers
  - Results in acceptable range
    - Levelized cost of energy
    - Return on equity
    - Debt service coverage ratio.



## 2a. Financial Preconditions

- Financial preconditions for both provisional and full licenses should be designed with the goal of attracting developers that are ready to implement wind energy projects
  - Deposit of 10 to 25% of the cost of preparatory work before a provisional license is issued. This amount is returned when the construction license is issued.
  - Deposit of  $x\%$  of total cost of project with the license application.  $x\%$  may be in the range of 1% to 5%. This is akin to requiring a deposit from auction participants. Part of the license application deposit may be returned as important milestones are met. If the milestones are not met, the deposit amount is forfeited
  - Revocation of construction license, cancellation of land lease and release of block on transmission capacity, if clearly defined milestones are not met by the project

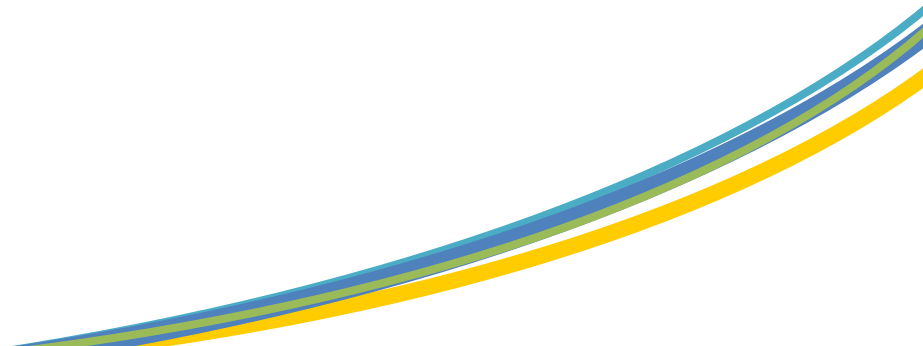
## 2b. Illustration of Performance Bond

- An illustration of milestone based process:
  - a% of deposit amount is refunded after license is issued
  - b% of deposit is refunded after contract is signed with turbine manufacturer and an advance is paid to the turbine manufacturer
  - c% of deposit is returned after civil work begins
  - d% of deposit is returned after turbines are received at the site
  - Rest of the deposit is returned after successful commissioning of the project



# 3. Balance Sheet Requirements

- Specify requirements on the balance sheet of developers seeking a license. For example:
  - Balance sheet than can support at least 50% equity ownership in the wind farm
- Limitations of this approach:
  - Precludes startups from participating in the sector
  - Precludes organizations/individuals that do not have the capital, but possess a variety of other capabilities essential to a wind project.



# Conclusions

- Qualifying wind developers for awarding wind construction licenses is a complex problem
- Qualification criteria are important in order to realize targets for wind energy
- The key elements to designing a qualifying system:
  - Qualification criteria must be country specific
  - Essential to choose a combination of criteria (licensing and financial) and tailor the criteria to local conditions
  - Continuous review and update of criteria and constant evaluation of the effectiveness should lead to higher levels of participation from serious developers
  - Transparent and effective implementation and enforcement of qualifying criteria is as important as the criteria



# Conclusions

- Example of qualifying criteria:
  - For provisional license, first-come-first-serve with a performance bond of substantial amount
  - For construction license, review by experts of all the preparatory work, published criteria for acceptable range of results, performance bond, and credible financing plan
    - Conditions Precedent for construction license should be for shorter duration, maximum 2 years
    - Milestones and schedule, with associated liquidated damages

