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## THE BOTTOM LINE

Permitting, licensing, and other authorization procedures are an integral part of investing in renewable energy. For private companies, the quality of these procedures can drastically affect transaction costs and project risk. Optimal regimes are tailored to country specifics and depend on the way in which private investors access the market in the first place—from auctions to site-specific tenders to standardized contracts on a first-come, first-served basis. Although there is no single best practice when it comes to authorizing renewable energy projects, common principles exist that signal an investor-friendly and socially and environmentally responsible regime.

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# Permitting and Licensing Regimes for Renewable Energy Projects

## Why is this issue important?

### Investor-friendly permitting regimes can drastically reduce transaction costs and project risk

When building and operating a renewable energy (RE) plant, project developers must obtain many different licenses, permits, authorizations, approvals, rights, and clearances from national, regional, and local authorities. This is necessarily time-consuming, although there are significant differences between countries when it comes to the number, length, and sequence of procedures. One common observation is that procedures usually differ depending on technology and the size of the plant.

Permitting regimes are typically embedded in an overall regulatory framework for the RE sector, which often contains incentives for RE including feed-in tariffs, tax benefits, mandatory offtake agreements, guaranteed connection to the grid, and priority dispatch of generated power. The entirety of the incentive framework, together with resource availability, country risk, the nature of demand, and other factors, determines the attractiveness of a country to private investors in RE.

Although simplified permitting regimes on their own are not sufficient to attract investments, making necessary procedures investor-friendly and efficient can drastically reduce transaction costs and cut project preparation time, especially for small projects. The sequence and design of regulatory procedures should provide maximum *ex ante* transparency for investors about available support schemes and residual risks.

Because the financial viability of many RE projects today still depends on some form of public support, rational and transparent regulatory procedures allow potential investors to gauge what support will be available at what point in the development cycle and what risks will remain with the developer. Without such *ex ante* visibility, projects cannot secure commercial financing. The bankability of a project is critically enhanced when legally binding regulations govern tariff levels, grid access, and other key contractual details, providing certainty early in the project development process.

By lowering uncertainty, well-designed procedures mean better returns for investors and lower tariffs or smaller subsidies for governments. In addition, they reduce conflicts among stakeholders. Therefore, it is important to analyze different permitting regimes and identify best practices that can help countries improve their regulatory frameworks where necessary.

## What are the characteristics of current practice?

### Permitting and licensing systems differ by country and by "entry regime," but some features are common to most

As a general rule, a project developer must complete the following steps to obtain authorization for an RE project. Each of these steps may involve several procedures, and some steps and procedures may run in parallel.

- General procedures for starting a business.
- Site acquisition and land-use rights (e.g., consent from planning authority).

"Best-practice regimes are clear and transparent, stable and predictable; the sequencing of different procedures is logical and ensures maximum *ex ante* visibility; key regulatory decisions are determined early in the process so as to facilitate rather than discourage commercial financing."

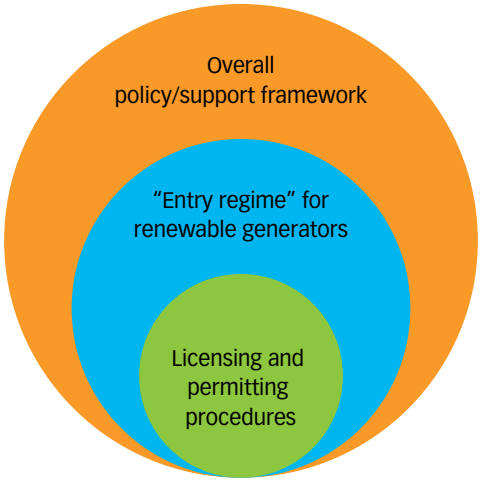
- Natural resource permits and environmental approvals.
- Grid-connection agreement (for on-grid projects). It may be necessary to ensure compliance with the national energy strategy or sector master plan (affecting generation and transmission).
- Power purchase agreement for offtake by a single buyer (usually the utility) or third parties.
- Technology-specific clearances, e.g., approvals from aviation authorities for wind projects.
- Procedures to qualify for subsidies or other forms of public support. These may involve registering as a "qualified/privileged/special" generator and in certain cases complying with local content requirements.
- Construction permits and authorizations, including approval of project design by a public authority; safety-related clearances from planning, sanitary, emergency, fire, and other authorities; and certification of the equipment used to build and operate RE power plants—all prior to commissioning the plant.
- Licenses or other approvals required to generate electricity and for certification of electricity generated from RE sources.

The sequencing and design of procedures within these general categories will depend on a country's overall legal framework and institutional setup (figure 1). Key project development steps—such as securing a site, a grid connection, and an offtake agreement—are often linked to the broader support mechanisms and preferential treatment offered to RE developers that qualify for them.

Specific characteristics of licensing and permitting procedures often depend on the type of "entry regime"—that is, the manner in which private investors enter into RE generation. Entry options range from auctions to tenders of specific sites to standardized procedures for handling unsolicited applications to build small plants (table 1).

A key feature that determines the attractiveness of an entry regime is whether the RE plant will benefit from a long-term offtake agreement at a price guaranteed for the duration of the agreement, thereby lowering the risk associated with recovery of the investment.

**Figure 1.** Permitting procedures are part of the overall policy framework for RE




*Source:* Authors.

Only in advanced markets where RE technologies can be deployed at or below grid parity will the absence of this feature not represent a handicap for RE development.

The size and potential number of RE projects within a given plant category play an important role in determining the type of entry regime adopted. Two or more different entry regimes can co-exist in the same country—for example, auctions for large on-grid projects and standard applications coupled with light-handed regulations for unsolicited small projects (stand-alone or connected to the grid).

Although the type of entry regime has a big impact on the sequence and the design of permitting and licensing procedures, the regulatory burden on project developers is not necessarily heavier or lighter under one regime or another, with the deliberate exception of light-handed regulation for small projects expected to have minor environmental impact.

**Table 1.** Overview of most common entry regimes worldwide (with guaranteed long-term offtake)

| Entry regime | Characteristics |
|---|---|
| **Approval of project applications according to prespecified screening criteria (three options)** | ***Approval of all applications that meet screening criteria***<br>• Developers select their own sites and obtain required permits and available support payments in return for compliance with regulatory requirements.<br>• The exclusive right to develop a site is granted to any qualified developer for a predetermined period over which the developer must demonstrate that the project is moving forward.<br>• Suitable for small- and medium-sized projects to which standard screening criteria can be applied.<br>• Recommended where the preselection of sites by a central authority does not make sense because of the large number of possible projects.<br>• Most effective if combined with standard-term power purchase agreements, offtake conditions (including price), and connection agreements. |
| | ***Selective approval of applications***<br>• Similar to above, except that support is not offered to all qualified projects.<br>• Additional screening occurs when the number of applications exceeds the number of projects that can obtain public support because of capacity caps or grid-access limitations.<br>• Sufficient institutional capacity for stage-two screening is required, and the process has to be transparent and verifiable at each stage.<br>• Selective approval substantially increases risk for developers preparing initial proposals; in most cases, competitive procurement (last option below) would be preferable in terms of transparency and predictability. |
| | ***Simplified licensing regime for small-scale or off-grid projects***<br>• Similar to universal approval but with reduced bureaucratic and administrative burden.<br>• Fewer procedures and requirements (e.g., less rigorous environmental clearance requirements).<br>• Increased use of standardized documents such as standard contracts, application forms, and so on.<br>• Fast-track procedures compared with larger projects.<br>• Simple registration rather than licensing as an option; implementation at local level can be considered.<br>• Appropriate for rural electrification, off-grid, and isolated mini-grid projects. |
| **Negotiated contracts** | • Unsolicited proposals to government or utility and direct negotiation of offtake price and other key contract terms between project developer and relevant authority, often on the basis of an initial memorandum of understanding.<br>• Reliance on private sector for identification of market opportunities, particularly for large, unique projects that lack comparators or replicability.<br>• Significant governmental capacity (in-house or imported) is required to negotiate balanced contract terms.<br>• Licenses and permits are obtained case by case.<br>• Risk of nontransparency / corruption. |
| **Tendering of specific sites** | • Call for bids for rights to develop one or more preselected RE sites at least cost.<br>• Site and technology selection done upfront by government or utility.<br>• Due to high transaction costs, this option is most suitable for medium-size and large projects.<br>• Licensing and approval process may be packaged with the winning bid (assuring winning bidder land-use and resource rights).<br>• Different degrees of specification of what exactly is put up for tender, from detailed specification of connection agreement and terms of power purchase agreement, to general rights for the use of the site (with bidders specifying key contractual terms in their bids).<br>• Assessment can be done in several stages (prequalification and selection) and can be based on qualitative and quantitative criteria. |
| **Auctions, competitive procurement, or public tendering of RE capacity** | • Competitive procurement of new capacity without preselection of sites.<br>• Key objective is to procure new generation at the least possible cost while allowing for private initiative in site selection and project design.<br>• May be technology neutral or technology specific.<br>• Auction may be designed in various ways, with weighting of both price and non-price factors.<br>• Recommended in high-capacity environments with good availability of RE resources and the potential for a large number of RE projects.<br>• Best results require coordinated grid planning to ensure interconnection of winning sites without delays. |

*Source:* Authors.

## Is there recognized best practice for permitting regimes?

### Optimal solutions are case-specific but follow key common principles

"As governments assess their permitting regime, each procedure should be viewed from the perspective of necessity (Is it really necessary?), effectiveness (Does it achieve its purpose?), and efficiency (Can it be streamlined, simplified, automated, or combined with other existing procedures?)."

Because regulatory procedures differ from country to country, recognized good practice tends to be country-specific. For example, Tenenbaum and his colleagues (2014) describe Sri Lanka's permitting regime as very transparent and well-designed. However the authors acknowledge that Sri Lanka's experience cannot necessarily be replicated in its entirety in other countries, warning that "it is dangerous to espouse a single best practice for all countries at all times."

Despite the need for flexibility at the country level, it is possible to identify permitting principles that provide certainty to investors and project developers, thereby reducing their transaction costs while also allowing public authorities to make sure that renewable resources are developed within the expected timeframe and in a sustainable and fiscally responsible way. Licensing and permitting procedures under such best-practice regimes are designed to take into consideration the available capacity of approving authorities.

As a general rule, of course, the regulatory institutions should be as independent as possible from political and stakeholders' interests. Best-practice regimes are also clear and transparent, stable and predictable; they have enforceable processing deadlines and are free of retroactive changes. They contain a recourse mechanism and avoid having the same information reviewed more than once by different offices. The sequencing of different procedures is logical and ensures maximum *ex ante* visibility: key regulatory decisions (on grid connection, offtake tariffs, etc.) are determined early in the project-development process so as to facilitate rather than discourage commercial financing.

A permitting regime that does not meet best-practice criteria and therefore is not attractive for private investors is marked by inconsistencies between legal/regulatory requirements and *de facto* practices. Application processes may be duplicative (for example, the same documents may require two different authorizations from the same institution), and tariffs may have to be negotiated with the national utility (or other offtaker) and approved by the regulator *after* the plant is commissioned.

As governments assess their permitting regime, each procedure should be viewed from the perspective of necessity (Is it really necessary?), effectiveness (Does it achieve its purpose?), and efficiency (Can it be streamlined, simplified, automated, or combined with other existing procedures?). Table 2 summarizes key characteristics of a good regulatory framework and of individual procedures.

Adhering to these principles will create an investor-friendly and socially and environmentally responsible regulatory framework for RE projects.

Recommended in all cases is that governments consider the publication of an investor guide that summarizes clearly the steps necessary to obtain licenses and permits, sets out the sequence of procedures, specifies deadlines, and provides accurate, up-to-date contact information for responsible agencies.[1]

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[1] An example of such an online guide for Kenya can be found under www.renewableenergy.go.ke and for Russia under http://russiagogreen.ru/ru/investorguide/.

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Live Wire 2014/17. "Incorporating Energy from Renewable Resources into Power System Planning," by Marcelino Madrigal and Rhonda Lenai Jordan.

Live Wire 2015/38. "Integrating Variable Renewable Energy into Power System Operations," by Thomas Nikolakakis and Debabrata Chattopadhyay.

**Table 2.** Characteristics of best-practice permitting regimes

| Key principles of the regulatory framework | Checklist to evaluate specific procedures |
|---|---|
| ***Legal consistency*** | |
| • Consistency of regulatory requirements with primary legislation | • Is the procedure required by legislation? Are there any inconsistencies between different pieces of legislation? |
| ***Transparency*** | |
| • Availability and reliability of information on required procedures (cost, application process and timing, information requirements, prerequisites/ sequencing, decision criteria, etc.)<br>• Information on projects granted provisional and final authorizations, and their expiry dates<br>• Information on the planned expansion of the national and regional grids<br>• In auctions and tenders: quality and transparency on what is bid out | • Does the procedure specify: (i) all documents required for the application; (ii) decision-making criteria; (iii) standard documents (e.g. application forms) that are easily available and a timeline for when responses can be expected; (iv) the cost for the investor? |
| ***Institutional capacity*** | |
| • Clear division of responsibilities between the authorities<br>• Adequate technical capacity in approving agencies<br>• No overlap or duplication of procedures and verifications among different authorities | • Which body is responsible for the procedure? Does it have the capacity to conduct the procedure in the proper manner and within the established timeframe? Can this body rely on information and decisions from other authorities? |
| ***Clear time frame*** | |
| • Explicitly specified and enforceable deadlines for approving authorities and project developers<br>• Clear provisions to convert a preliminary permit or resource license to a full permit where applicable | • Does the regulation specify a clear deadline for the whole procedure and each of its individual steps? What ensures that the responsible authority meets the deadlines? Is the timeframe for the validity of the license/ authorization specified? When can a provisional license be revoked? |
| ***Public consultation*** | |
| • Mandatory stakeholder consultation on key decisions with environmental and social impact (if not physical meetings, then good virtual mechanisms and public announcements)<br>• Clearly defined rights of stakeholders and processes by which they can register opposition | • Is public consultation required by regulation? How is it to be conducted and in what time frame? |
| ***Monitoring and evaluation*** | |
| • Regular evaluation<br>• External reviews of the regulatory regime | • Is there a monitoring system to review the implementation process and to evaluate the effectiveness and efficiency of the procedure? |
| ***Enforcement and recourse*** | |
| • Provisions to enforce compliance with laws/regulations<br>• Existence of a recourse mechanism for investors | • Are there any penalties for noncompliance (e.g., if someone builds a small power plant without getting all the required permits)?<br>• Does a recourse mechanism exist, and is it clearly explained and accessible for investors? |

*Source:* Authors.

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