Siting Transmission Corridors—

A Real Life Game of *Chutes and Ladders**

Oh, for the simplicity of *Chutes and Ladders*!

In the massive effort to attain energy independence by connecting vast renewable energy resources with energy-hungry population centers, power transmission lines are both the obstacles and the solution—the chutes and ladders—to success.

Everyone wants to harness the energy from wind, sun, earth, and tides, but moving it can be tricky. Transmission corridors are the means by which energy moves from source to destination. They are integral to energy conversion and creation of a sustainable energy portfolio. They are also a source of job growth and economic opportunity.

Energy entrepreneurs, transmission developers, public utilities, state legislatures, and federal regulators are all engaged in the ultimate goal of moving renewable energy. They may all differ on siting specifics, but proponents and opponents agree—load growth, construction permits, wildlife protection, property rights, and other concerns must all be addressed before lines can be built.

Establishing a national siting policy significantly increases the likelihood of using clean, renewable energy by encompassing a single process to plan, permit, and pay for transmission lines.

**Chutes and Ladders* is a trademark of Hasbro, Inc. for its board game.

While the childhood game of *Chutes and Ladders* can provide hours of fun and relies on luck, the real life challenge of *Siting Transmission Corridors* can take years of skillful navigation with millions of dollars on the line.

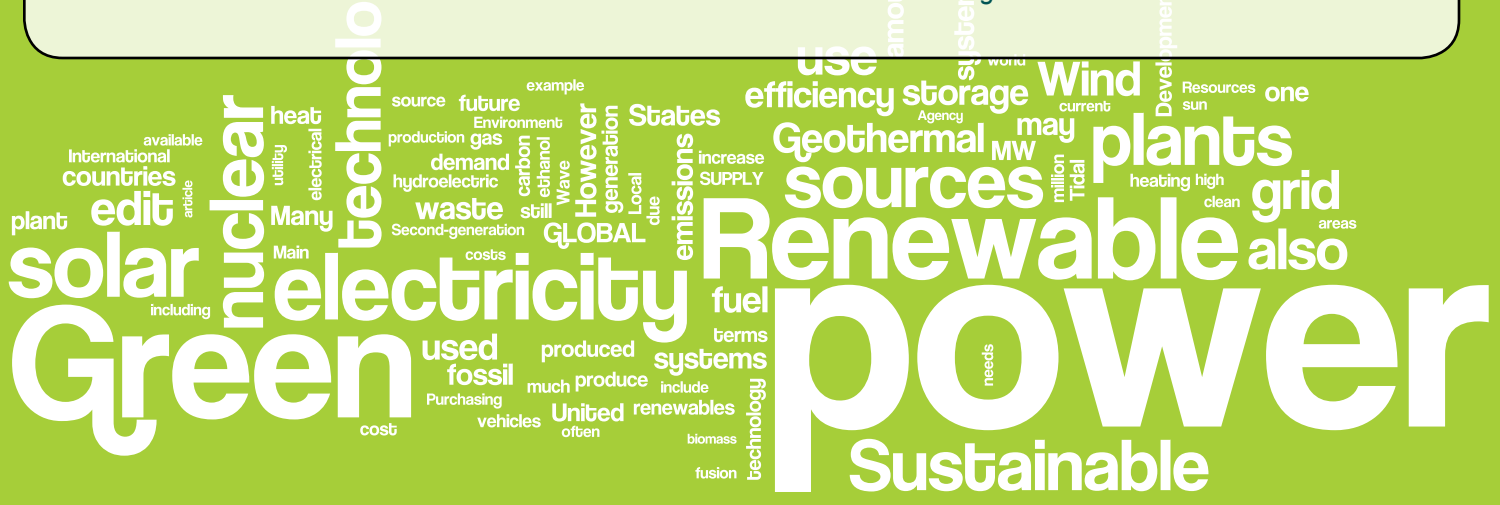
In the game, a ladder enables a competitor to advance quickly through the maze of daily accomplishments, while a chute represents a setback, the result of imaginary consequences. Players move their game pieces through a series of consecutively-numbered spaces, with the goal of being the first to finish.

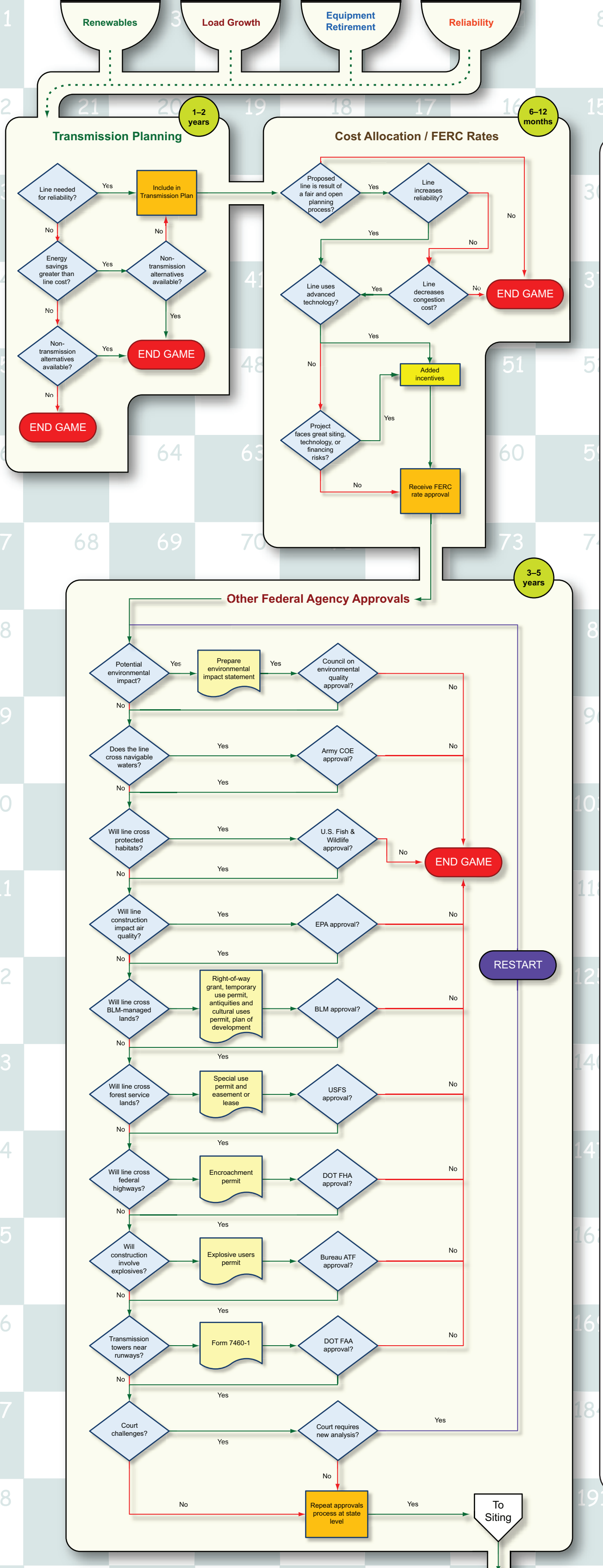
In *Siting Transmission Corridors*, however, the goal is to methodically overcome financial and regulatory challenges.

In the real life scenario, renewable sources, technology, and load growth might be seen as opportunities, or ladders. Chutes, on the other hand, are aging infrastructures, rates, regulations, and litigation.

This is a contest of gateways and gatekeepers, of opportunities and consequences, of collaboration and determination. Unlike child's play, where winning is based on chance, the challenge here is to forge alliances between new technologies and aging infrastructures, and to strategize mutually satisfactory outcomes while avoiding game-ending chutes.

So, grab a marker and try traversing the intricacies of *Siting Transmission Corridors*.





Transmission Planning

After identifying the best locations for harnessing clean, renewable energy, the first step is an infrastructure that uses a high-voltage interstate transmission system. The ideal would be to transmit the maximum amount of power through existing corridors. But the existing infrastructure simply cannot accommodate this surge.

The first ladder to climb, then, is that of transmission planning, with each rung defined by a permit. Are new lines needed? Are potential savings greater than costs? Which utilities are involved? Does this require authorization or cooperation by regional or interstate authorities? Does the project face siting, technology, or financing risks? Are non-transmission alternatives available? Can energy storage or demand response strategies be implemented?

Awaiting these responses is akin to waiting your turn. Considering that each permit may take one to six months, the wait between turns can add up to years.

Federal Agency Approvals

Here's where the game gets interesting. What is the potential environmental impact? Do transmission lines cross navigable waters or protected habitats? Is approval needed by the Army Corps of Engineers? Bureau of Land Management? Will construction require explosives? Environmental impact statements alone can mire a project for years.

No matter how cost effective and equitable each federal agency's management practices may be, plotting a course through the daunting matrix of federal agency approvals is tedious and time consuming. Each rung of this ladder may initiate critical adjustments to planning, cost allocation, and siting processes. The applicant must decide if it is ready and willing to pay for new transmission corridors as siting and pricing are projected.

FERC Approval

The Federal Energy Regulatory Commission (FERC), an independent agency that regulates the interstate transmission of natural gas, oil, and electricity, must first determine if the proposed line is the result of a fair and open planning process. It provides regulatory certainty through consistent approaches and timely actions.

But the process isn't easy. It may involve corporate mergers, acquisitions, and transactions; licensures and inspections; mandatory reliability standards; and a myriad of environmental matters.

And then there are those areas outside of FERC's jurisdictional responsibility: state public utility commissions and rural electric cooperatives; regulation of retail electricity; power marketing agencies; physical construction of generation facilities; and regulation by other agencies, like the Nuclear Regulatory Commission.

By its very nature, approval is an arduous, multi-year process full of ladders that reach from one approval process to another, as well as plummeting chutes that result from unanticipated costs, actions by interstate planning authorities, or court challenges that can drive a circular process lasting years.

In 2009, for example, the U.S. Court of Appeals for the Fourth Circuit ruled that federal law does not apply to a state's authority to make decisions on major interstate transmission lines within its borders. The U.S. Supreme Court declined to hear an appeal, generating uncertainty over FERC's authority to override a state's denial of a siting permit.

Transmission Siting and Cost Allocations

Three to five years later, after obtaining all federal approvals, the final challenge is crossing non-federal land. State properties and private land issues can lead to purchased rights, eminent domain, and even more court challenges. Building interstate and interregional transmission facilities can take years.

As with any game, there may be bonus rounds and extra turns: favorably litigated outcomes, attractive rates, tax incentives, stimulus programs, and integration of energy storage devices or demand response strategies.

The future of Smart Grid relies on careful navigation of this intricate maze of chutes and ladders.

The Winner

Siting Transmission Corridors is not child's play.

We need a clear national policy that increases the generation and use of clean, renewable energy. Renewable energy resources must be secured and transmitted as part of our national electricity supply portfolio. Federal authority over transmission planning, siting, and cost allocation will significantly increase the likelihood that needed facilities will be constructed in a timely manner.

NEMA remains a strong proponent of a national siting policy. It is essential to meeting our nation's goal of reducing reliance on carbon-emitting sources of electric energy.

NEMA supports legislation that designates FERC as the lead agency for conducting environmental reviews. A clear nationwide transmission line siting process would streamline current practices, facilitate construction, create domestic jobs, and expedite transmission corridors that deliver clean and renewable energy.

Designed by NEMA Communications

The National Electrical Manufacturers Association
1300 North 17th Street, Suite 1752, Rosslyn, VA 22209
703.841.3200 • www.nema.org