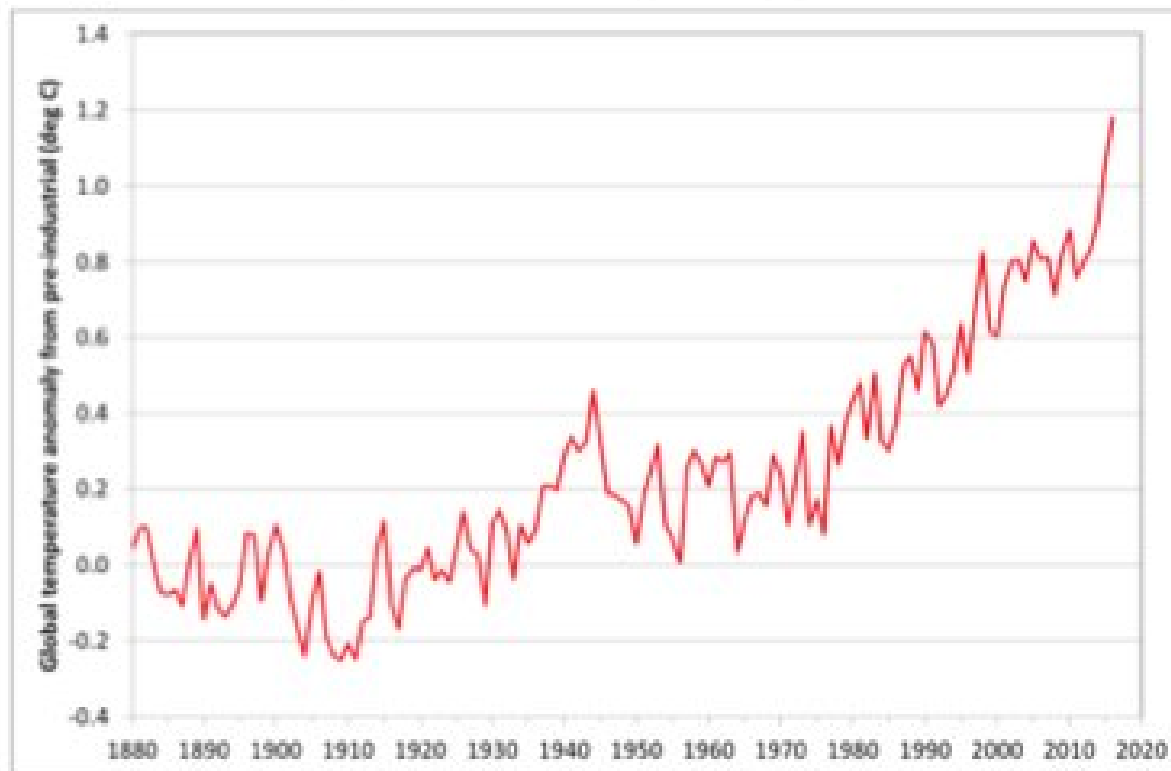


Carbon Patent Royalty: Using Patents To Put A Price On Carbon

Global temperatures – change from pre-industrial



Data: NOAA, NASA, UK Met Office/CRU

The World Meteorological Organization, [Nov. 14, 2016](#)

EXECUTIVE SUMMARY

- Need: Putting a price on carbon without relying on government action.
- Solution: Use existing laws to license and enforce patents to establish a patent-based running royalty on carbon emissions.
- Impact: Businesses will reduce carbon footprint to reduce carbon patent royalty costs.

PROBLEM

- Essential to dramatically and rapidly decrease carbon emissions to slow and reverse global temperature rise.
- Putting a price on carbon emissions may be the best way to accomplish this.
- But, governments change, and cannot be relied upon to impose and maintain a tax on carbon emissions.

NEED

- Some way to put a price on carbon that:
 - Requires no executive or legislative action;
 - Will be accepted by most businesses as a legitimate, fair, predictable cost of business;
 - Can be imposed, in at least most countries, on any reluctant businesses.

SOLUTION

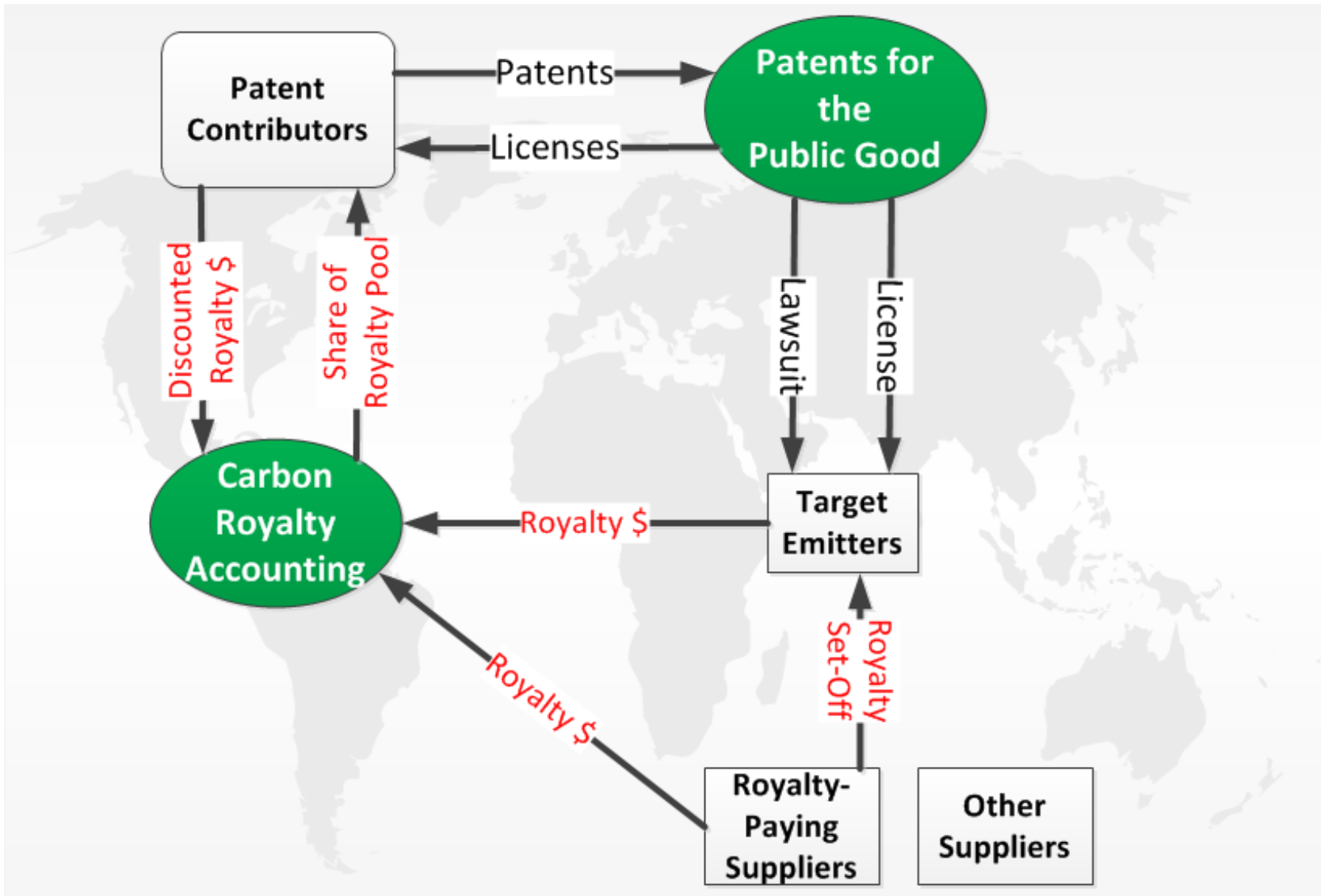
Impose a carbon patent royalty:

- on carbon emissions,
- via patent-pool licensing and enforcement,
- in multiple industries,
- in multiple countries,
- at each stage of the carbon stream, including producers, distributors and consumers.

IMPACT

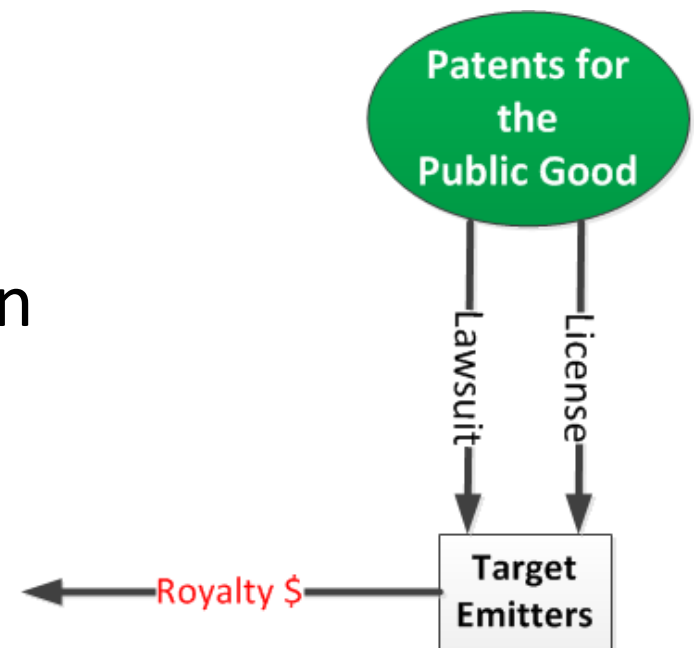
- Most worldwide business sources of carbon emissions will adjust their practices to lower the amount of carbon patent royalties they pay.
- Any who resist paying will be faced with patent enforcement proceedings wherever their products are made, used or sold, and pressure from their customers.

MODEL



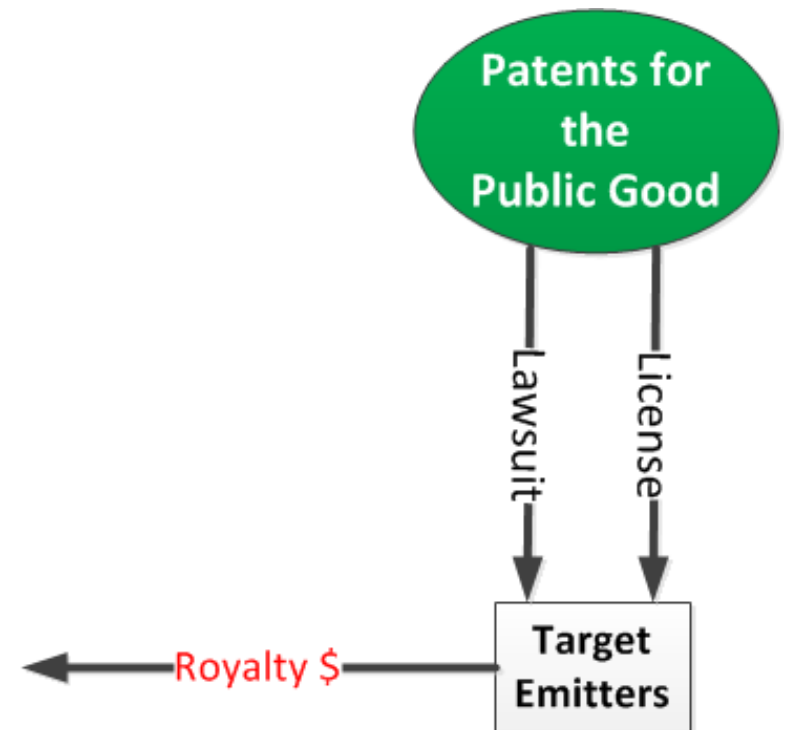
MODEL

- Acquire existing patents on offending technologies
 - Create and license multiple, technology-specific patent pools
 - Impose a flexible carbon royalty in pool licenses
 - Enforce patents in litigation
 - Seek injunctions and ITC exclusion orders



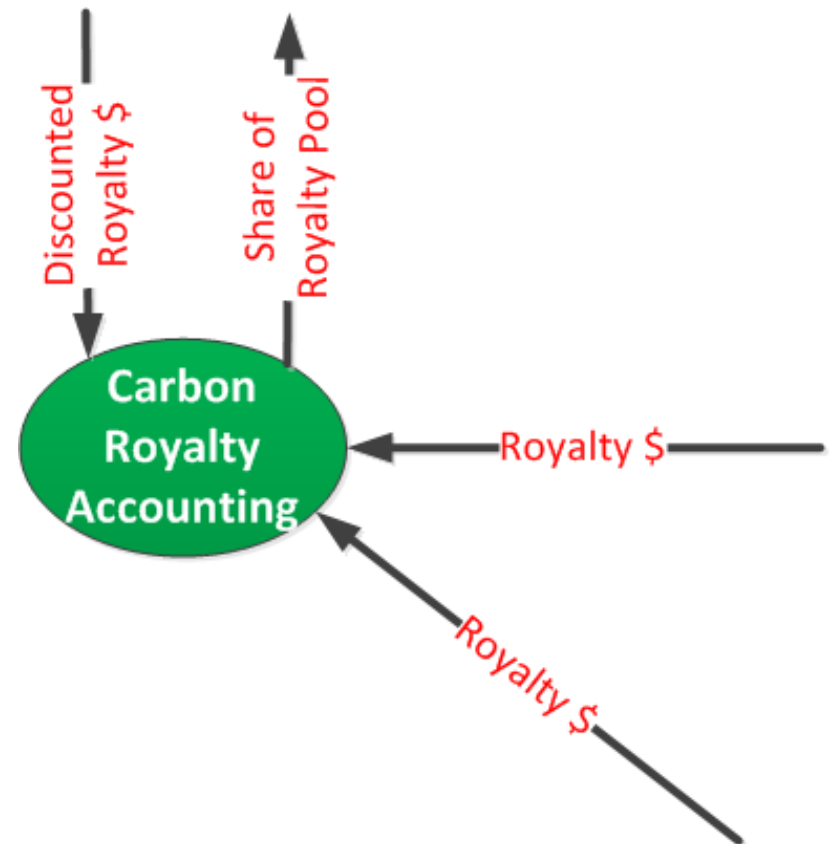
MODEL

- Also acquire/license/enforce existing patents on non-offending but essential technologies



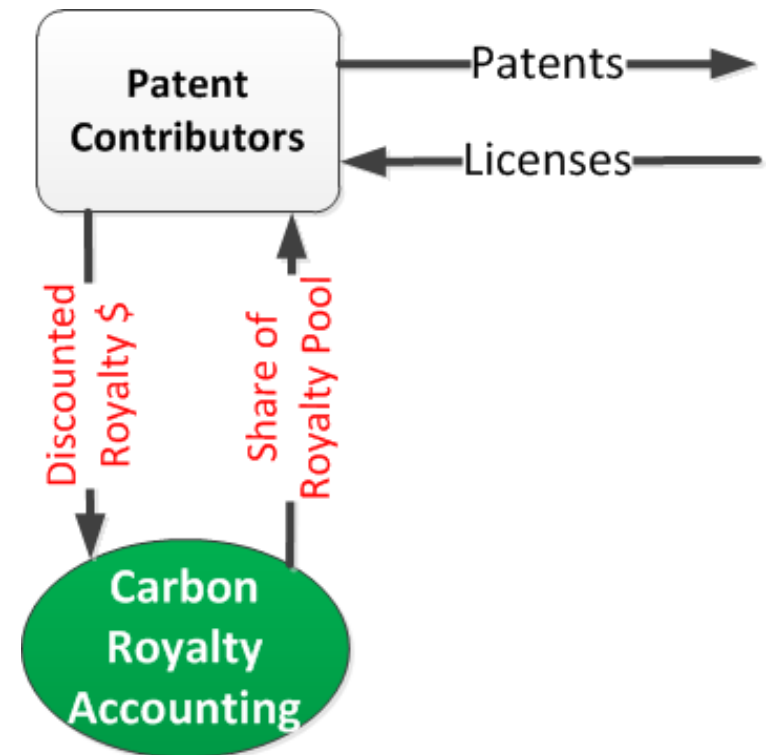
MODEL

- Independent non-profit sets carbon-royalty rates and audits carbon-royalty payments
 - University and industry experts (e.g., [EPRI](#), [AUTM](#))
 - Worldwide carbon audits of licensees and their suppliers
 - Allocate royalty payments to different technology-specific patent pools



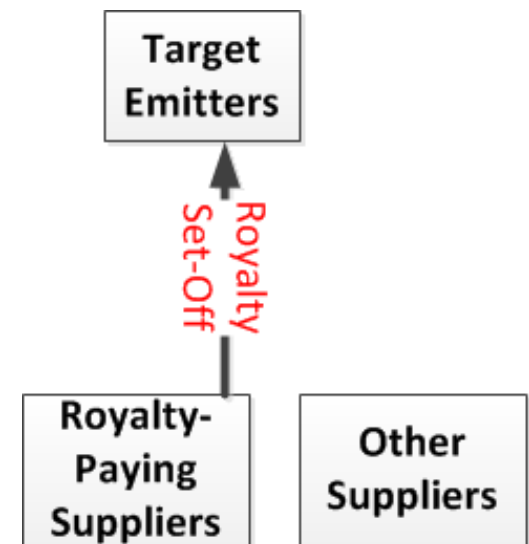
MODEL

- Create economic incentives for Universities and companies to take licenses early
 - Voluntary carbon-royalty licensees share in a carbon-royalty revenues pool—litigation defendants do not
 - Discounted royalty rates
 - PR: Publicize early contributors



MODEL

- Create competitive incentives for *suppliers* to take licenses
 - Set offs for carbon royalties paid by supplier
 - Royalty payments higher for distributors and consumers than producers
 - Web site identifying licensed and unlicensed suppliers



ADVANTAGES OF MODEL

- Companies already favoring a price on carbon will have acceptable business justification
- Universities reluctant to litigate have financial and PR incentives to contribute patents to the patent pools
- Relatively low-emission companies have economic incentives to take a license
- Patents have some extraterritorial effect, and model can be used in most countries
- Bypasses “standing” hurdle of environmental lawsuits

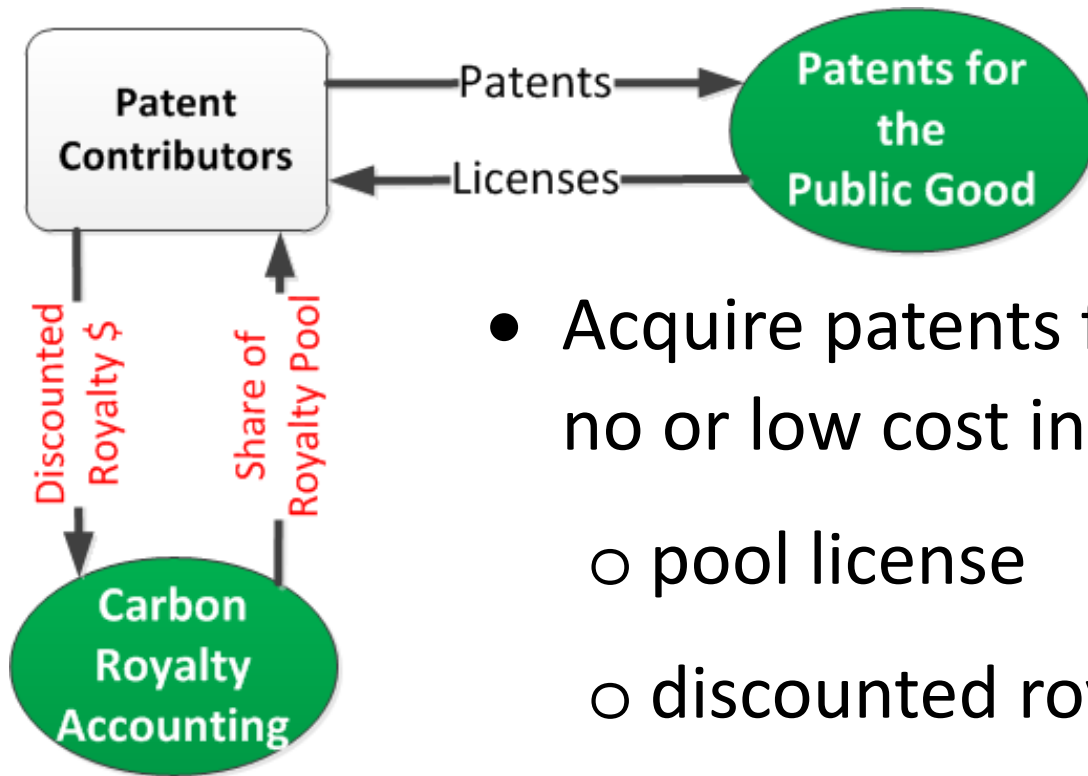
ADVANTAGES OF MODEL

- Can leverage patented technologies that are essential to regulation-compliance (e.g., flue-gas desulphurization)
- Self-sustaining: carbon royalty payments help finance further patent acquisition and enforcement
- Patent enforcement need only be the exception, with most companies volunteering to accept fair and predictable carbon pricing

IDENTIFYING PATENTS TO ACQUIRE

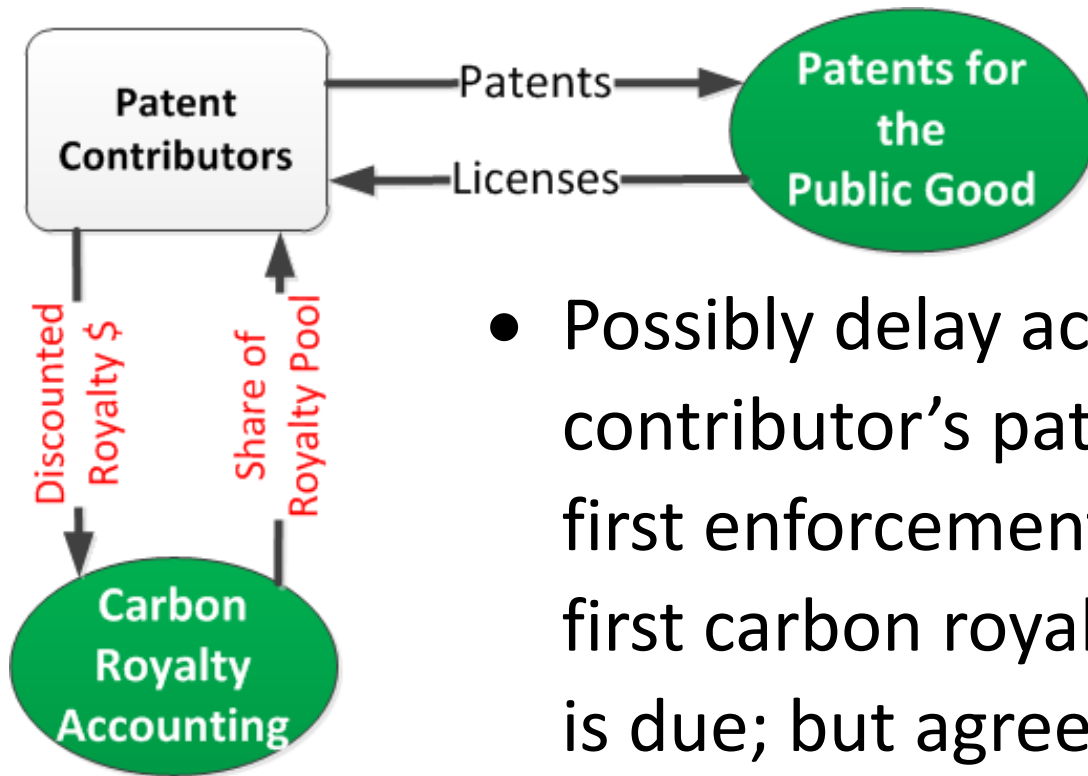
- Patent holders who have announced support for carbon pricing
- Universities with relevant patent holdings
- Patent holders who have exited an industry
- Traditional non-practicing entities
- Patent auctions

ACQUIRING PATENTS



- Acquire patents from patent holders at no or low cost in return for:
 - pool license
 - discounted royalty rate
 - payment of carbon royalty delayed until certain % of industry is paying
 - share in carbon-royalty revenues pool

ACQUIRING PATENTS



- Possibly delay actual transfer of contributor's patent to the pool until first enforcement action is brought or first carbon royalty payment to the pool is due; but agree to pay maintenance fees for universities
 - Possible “virtual pool” concepts

CARBON-ROYALTY STRUCTURE

- \$X-Y-Z/ton of CO₂ equivalent estimated to be released producing, distributing and consuming in identified carbon stream
- X (highest) for consumer role; Y (middle) for distributor role; Z (lowest) for producer role
- Accounting group periodically assesses each licensee's roles in carbon stream as X%, Y%, Z%
- Accounting group varies rate (within agreed range) to account for current market conditions

CARBON-ROYALTY STRUCTURE

- Set offs for any upstream carbon royalty, carbon tax, or carbon fee paid, to encourage downstream entities to select suppliers who have taken license
- Low-cost, quick arbitration process for all disputes
- Continuous reassessments and outside audits of all factors affecting royalty payments and distributions

METRICS FOR EARLY SUCCESS

- Large emitter takes license (even if contingent on sufficient % of industry joining too)
- Half-dozen Universities contribute substantial, industry-relevant, patent portfolios
- Carbon-royalty revenues sufficient to trigger net-positive payments to an industry licensee
- A court grants an injunction based in part on “public interest” factor

INITIAL NEEDS

- Form Advisory Council
 - Philanthropists
 - Universities (tech. transfer, environmental, law, and engineering departments)
 - Industry experts
- Form and staff an organization
- Retain top-tier U.S. patent litigation law firms

INITIAL NEEDS

- Secure letters of intent (to negotiate carbon patent royalty agreement in good faith) from some:
 - States
 - Cities
 - Universities
 - Major producers
 - Major distributors
 - Major consumers

INITIAL NEEDS

- Funding
- Interest Universities and “carbon pricing” companies, with help from Advisory Council members
- Find volunteers and hire staff with expertise in targeted industries, patent acquisition, patent licensing, patent pools, antitrust guidelines for patent pools, royalty audits, existing carbon tax and carbon pricing models
- And, of course, Patents

NON-CONFIDENTIAL

- This presentation is not confidential.
- The model is not proprietary.
- Please share with others.

QUESTIONS - FEEDBACK

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