



Oregon's Forest Resource Trust Forest Establishment Program



Fast Facts

Activity: Forestation

Launch Date: 1993

Purpose: Provide landowners with financial assistance to establish forests while offsetting carbon emissions within the state

Forest Ownership: Private and local government ownership.

Accomplishments to Date: 1028 acres, 34 landowners

Funding: Carbon offset purchase, donations and state appropriations

Market: Self-developed

Protocol: Self-developed

Registry: To be determined

Aggregator: Oregon Department of Forestry

Verifier: To be determined

Payment Mechanism: Deferred payment loan for forestation in exchange for carbon credit "rights"

Climate Benefits: 428,000 metric tons CO₂ from 880 acres enrolled in 2003¹

Co-Benefits: Sustainable forest management, watershed protection, fish and wildlife habitat, timber supply

1. CO₂ benefits from current 1028 acres not yet calculated

Overview

With 28 million acres of forestland, approximately half of the state's land base, forestry plays an important role in Oregon. Currently, there are more than 166,000 non-industrial private forest (NIPF) landowners in the state who collectively own approximately 16% of Oregon's forests. Oregon is unique in that it was the first state to develop its own market and protocol for forest carbon offsets. As the founder of the Forest Resource Trust (FRT), the State of Oregon is in many ways a leader in providing incentives for small-scale landowners to manage for carbon sequestration.

The FRT was established by the Oregon Legislature in 1993 to provide financial assistance to non-industrial, private landowners to establish and maintain healthy forests on lands currently in non-forest use but capable of supporting forest forestlands. Statute revisions passed by the 2007 Oregon Legislature expanded eligibility to include qualifying local governments; however, no local governments participate as of yet. The Forest Establishment Program is the first and only to be developed as a program of the FRT so far. The Forest Establishment Program provides deferred payment loans for forestation projects through funding obtained from various sources, including carbon emission offsetting. In exchange for this assistance, landowners agree to transfer the ownership of the carbon credits generated by the project to the state for use in offsetting the emissions of a power generation plant, the Klamath Cogeneration Project. Landowners are required to pay back funds only if they harvest and the harvest results in profits. This allows the FRT and, therefore, the state to benefit, but only if the investment provided by the FRT successfully increased revenue for the landowner.

This case study describes the Oregon Forest Resource Trust Forest Establishment Program. We describe the administrative partnerships and programmatic structure unique to program, as well as its development, challenges encountered along the way, and lessons learned. It also provides data on accomplishments so far and details the roles of players in bringing carbon offset projects to market.

The Forest Resource Trust Forest Establishment Program

In 1991, the concept of the Forest Resource Trust was initiated by a group who came together under the direction and inspiration of Secretary of State Phil Kiesling. The original intent was not to reduce carbon emissions or mitigate climate change, but rather was a broad concept to develop a mechanism for Oregonians to invest in forests for future generations and to convert large areas of undeveloped lands into new forests. As Oregon's forests are rich and capable of generating significant profit for landowners, particularly in western Oregon, these new forests would enhance Oregon's ecological and economical assets. Based on the recommendations of bankers, forestry analysts, private forestland owners, environmental organizations and public agencies, the FRT was established by the Oregon Legislature in 1993.

The Forest Establishment Program (originally named the Stand Establishment Program) was conceived under the guidance of FRT goals as a way to improve ecological health and address climate change, as well as increase potential timber profits for landowners, local governments and the state. The Forest Establishment Program is a partnership between ODF, other organizations and private businesses to provide assistance to landowners to establish new forests on agricultural, range, pasture and other non-forested lands suitable for forest cover. The Oregon Department of Forestry Board of Forestry, who has oversight of the FRT, adopted rules and statutes defining the Forest Establishment Program as a program that would be funded through the FRT. These rules and statutes effectively linked the FRT with climate change mitigation and carbon offset generation. The first projects were implemented in 1994 using part of \$3.5 million dedicated to the FRT from Oregon State Lottery funds.

In the mid-1990s, Oregon's policy link between carbon dioxide emissions and forests was strengthened by the Oregon Energy Facility Siting Council's (EFSC) "Best of Batch" site license competition. The EFSC adopted this competition as a creative way to comply with legislation that

A. Participation 1995-2009

Area enrolled	1028 acres
Active projects	34 (NIPF)
Average project size	31 acres
Largest project	75 acres
Acreage pending processing	155 acres

resulted from controversy surrounding the "need for power" standard for power plants in Oregon. As a compromise between abolishing the controversial "need for power" requirement and keeping the status quo, the 1995 Oregon legislature adopted a one-time exemption for up to 500MW of new natural gasfired power plant capacity from having to demonstrate need. However, potential applicants for this one exemption were required to include strategies describing how they would reduce the environmental impact of their proposed project. The Klamath Cogeneration Project won the competition by demonstrating the lowest net carbon dioxide emission level through efficiency, cogeneration, and specific offset projects, including an investment of \$1.5 million of CO2 emission reduction offset monies into Oregon's Forest Resource Trust (1).

The \$1.5 million investment was placed into the FRT in 1999. As a result, the FRT's Forest Establishment Program became, at that time, the nation's largest carbon offset program using non-industrial, private landowners to sequester carbon by planting trees. Offsets produced using the FRT's carbon monies are not given directly to the Klamath Cogeneration Project, but rather are retired by the Oregon Energy Facility Siting Council after the ODF measures and reports them.

Currently, the Forest Establishment Program operates as a deferred-payment loan program that provides financial assistance in the form of a grant that is paid back at low interest in the event that the landowner profits from the financial assistance (e.g., through the sale of timber from forests created with FRT financial assistance). Essentially, there are no "out-of-pocket" expenses for the landowner, since the loan covers up to 100 percent of the direct costs of site preparation, tree planting, seedling protection, competitive release activities, forestry consultant services and other practices necessary to reach a "free-to-grow" forest.

Landowners choosing to participate in the Forest Establishment Program commit to establishing a healthy forest and take responsibility for seeing that the work is completed. A detailed plan guides each project by setting cost limits and identifying best practices. All sites are reviewed for their feasibility to support forest cover and whether the current condition is supporting environmental values, such as oak prairies and savannas, which the landowner may wish to maintain or enhance as an alternative.

Landowners enter a long-term contract specifying that when the land changes ownership, FRT obligations will continue from one owner to the next. By participating in the Forest Establishment program and receiving financing, the landowner agrees to assign rights to the project's carbon dioxide emission reduction benefits (including carbon offsets) to the FRT (see market chain analysis) (2).

Loan repayment occurs only when the landowner chooses to harvest timber. Payments apply to principal first. If timber is harvested from forests created with FRT funding and profits are generated, landowners must repay the Trust with fifty percent of net receipts for thinning, or if the land is in final harvest, repay all Trust costs plus four percent simple interest as pro-rated against the area harvested. In this manner, both the state and the landowner stand to profit. The FRT provides landowner risk protection in case of catastrophic loss or negative financial impacts from new regulations. Loan repayment obligations may be reduced, or the forest will be restored to preloss conditions at no expense to the landowner (3).

Additionality is established by planting strictly on underproducing land, which would otherwise likely remain as such. A baseline is set for each project based on the type of vegetation present on the site at the time of application. Permanence is addressed in two ways. First, following a timber harvest, carbon emissions are replaced through reforestation and subsequent carbon sequestration and storage in the newly planted stand. Moreover, FRT uses a stock-flow approach, in which carbon dioxide emission offsets are limited by the long-term average amount of carbon stored over repeated cycles of timber harvest and regeneration. There is little potential for leakage through the FRT because the acreage forested is previously underproducing land, and thus does not detract from the land base used for high-value range and agricultural crops (4). Third party verification is not required at this time.

Project sites must have once had forests or be capable of growing forests, and must have at least 10 contiguous acres of brush, crops, pasture, orchard or other use not containing a full stand of trees or seedlings. Since the Forest Establishment Program values timber supply, riparian

(streamside) and other woodland restoration projects are allowed under FRT funding when the assessment of the project's commercial forest area can cover the cost of establishing the non-commercial forest area (2).

Partners and their Roles

Oregon Board of Forestry:

The Oregon Department of Forestry Board of Forestry supervises all matters of forest policy within Oregon. In this manner, it approves rules and statutes pertaining to the FRT, such as the development of the Forest Establishment Program, and is responsible for the management of the FRT program.

The Oregon Department of Forestry (ODF):

ODF coordinates and facilitates all aspects of the FRT, including technical and financial assistance and outreach. ODF is responsible for implementing the FRT and policies adopted by the Board of Forestry, which includes developing a measurement and monitoring plan for reporting carbon offsets arising from forestation projects funded through the Forest Establishment Program. ODF is permitted to use a portion of FRT funds for administrative purposes.

Forest Resource Trust Advisory Committee:

The FRT Advisory Committee is a standing committee to the Board of Forestry that assists in managing the FRT and developing principles and standards for forest carbon accounting.

Oregon Department of Energy, Oregon Energy Facility Siting Council (EFSC):

The EFSC is a state-appointed board which includes both public membership and Oregon Department of Energy staff. It evaluates the need and the impacts of new energy facility sites on the environment, public health and safety (5). The Siting Council retires reported carbon offsets arising from FRT projects per the requirements of the site certificate of Klamath.

Private Consulting Foresters:

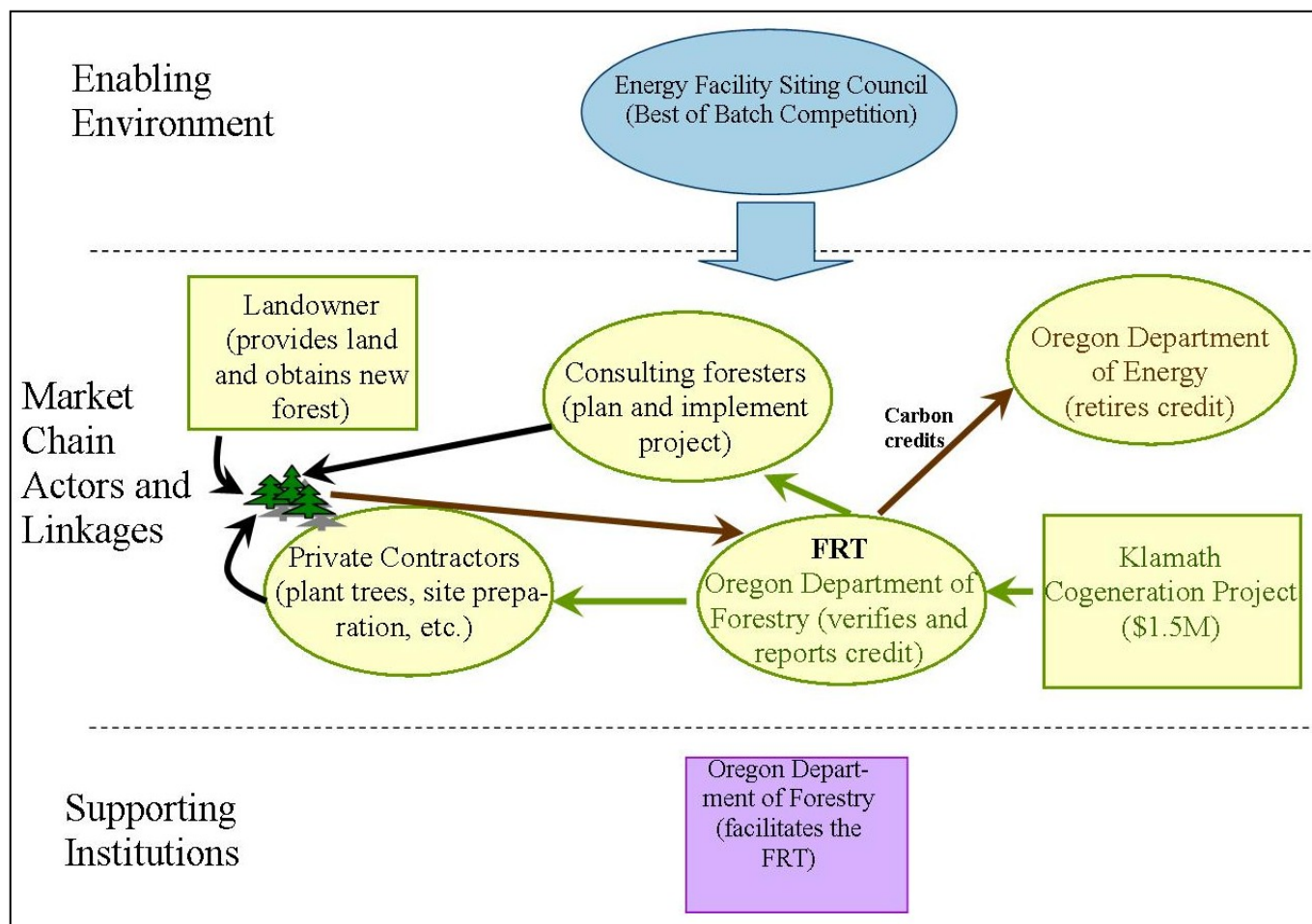
ODF contracts landowner outreach to three consultants. Eligible landowners can hire other consulting foresters to develop their project plan and/or manage it.

A. Balance of Forest Resource Trust as of June 2009 (approx.)

Obligated to other projects or pending obligation (\$245,482 from Klamath)	\$610,000
Available for forestation projects (non-Klamath)	\$26,000
Available for FRT administration over the 2009-11 biennium	\$145,000
Undetermined	\$120,000
Balance (\$501,000 from Klamath)	\$901,000*

*Sources of funds: Oregon State Lottery, PacifiCorp investment, donations from Colorado architectural design firms, and offset monies from the Klamath Cogeneration Project. Of these, only Klamath was obligated by law. In 1995 2.5 million was re-appropriated by legislature to other uses (J. Cathcart, personal communication, October 2009).

Market Chain Analysis—Initial Program 1993



The market mapping technique used in this report was adapted from research conducted by the Food & Agriculture Organisation of the United Nations and Policy Innovation Systems for Clean Energy Security (6). The green arrows represent revenue streams. In the market chain actors section, the left-side squares represent carbon "producers", the right-side squares represent carbon "processors". The enabling environment represents the surrounding set of circumstances in which the program finds itself, but has no direct control over. The supporting institutions are not directly a part of the market chain, but provide vital services or support.

The Oregon state government plays an instrumental role in creating the market by engaging in all three sectors of the market chain. Two main agencies, the EFCS and the ODF, facilitated the use of the FRT to access the carbon market. The Best of Batch competition motivates private company to invest in carbon offset monies. At the end of the chain, the EFSC retires the carbon credits.

As well as being the sole supporting institution,

ODF is the central actor who, through the FRT, distributes private funds to landowners and on-the-ground contractors. Landowners can establish a forest without any up-front cost, and in exchange, forfeit their rights to the carbon credits generated by the new forest. Unlike other aggregating institutions, the ODF is not linking these landowners to an independently existing "free" market, but rather is linking landowners to a market in major part created by the state.

The case of the FRT highlights the relationship between the state and the private sector. The private sector is incorporated in the market chain at the implementation level as the producers. They provide the land base on which to execute the project (landowners) and the labor and expertise to carry out the project (contractors). The private sector also provides the financial means. Interestingly, non-profit organizations are not actors in the market chain.

Private Contractors:

Multiple private contractors assist with project implementation and perform activities such as tree planting, site preparation, herbicide spraying and seedling protection from animal damage.

Lessons Learned

Since its inception, the FRT has undergone many changes to better meet the goals and needs of the players. This evolution has not been without challenges. Some of those challenges and solutions are listed here.

Beginning Outreach Efforts

FRT was originally designed by an advisory committee and was not “beta tested”. In hindsight, the program may have been better received if landowner and field staff input had been incorporated into the design (J. Cathcart, personal communication, October 2009).

Complexity

Perhaps the most notable challenge faced by the FRT has been low enrollment. What has perplexed state partners is that, with no initial investment required and low minimum enrollment acreage, there should have been few financial barriers for small- and medium-scale forest landowners to participate. Experience taught state partners that the complexity of the program was a barrier to these potential enrollees.

In 2006, the Board of Forestry directed the ODF to reconvene the Forest Resource Trust Advisory Committee to, in part, address this problem. The Board of Forestry instructed the committee to review the program, improve its vitality and simplify the process to make it more attractive to landowners (7). Consequently, several changes were implemented in 2007. For one, a sophisticated revenue sharing option was eliminated and replaced with the current system, and compound interest was changed to simple interest. Additionally, a requirement for a timber lien on forest products arising out of forestation projects was removed. Landowners had stated concerns over what was perceived as a long-term government obligation engendered by the lien.

Finally, a provision that increased allowable ownership size of sites with lower productivity was included to expand eligibility to more non-industrial landowners. The

previous maximum ownership acreage of 5000 acres of medium and high site productivity precluded many potential suitable lands of lower site productivity from participation. For example, some large acreages on low site forestlands in Central and Eastern Oregon do not have sufficient annual harvest revenues to manage their lands. Thus, ownerships of up to 15,000 acres of low site forestlands were included. Eligibility was expanded to include qualifying local governments as well.

The Forest Resource Trust was revised again in 2009, generalizing the former **Forest Establishment Program** to the **Loan Program**. As an alternative to the Loan Program, the Board of Forestry authorized implementation

of an additional means of financial and technical assistance through a straight cost-share program. The cost-share program is only for non-industrial private landowners. The Cost-Share Program is intended to consider statewide projects other than tree planting (streams, wildlife, etc.) and create a more flexible long-term program which has yet to be developed. As cur-

rently conceptualized, the landowner would be reimbursed for a portion of the cost of conducting eligible activities to improve management of existing forests for timber, fish and wildlife, water quality and other environmental purposes. It sets high priority for funding projects consistent with conservation plans and strategies of the Oregon Department of Fish and Wildlife such as the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds. This mechanism has low administrative costs and could be easier to understand, since landowners are accustomed to Federal Agency cost-share structures.

Funding

The Trust has faced difficulty securing permanent funding. In the past, staff foresters from the ODF provided technical assistance with completion of the tree planting project and were available to provide guidance about project management responsibilities for the landowner (J. Cathcart, personal communication, October 2009). However, due to the current global economic crisis, significant budget cuts to the ODF no longer allow this. Without sufficient financial resources, it is unlikely the program will be able to provide the outreach and technical support need to substantially increase enrollment. Hence, assuring steady revenue for



the program is critical to ensure viability of the FRT. The ODF is working with the FRT Advisory Committee to develop a strategic fund raising plan to secure money for the FRT loan and cost-share programs.

Planning Ahead

State partners have recognized the importance of trans-disciplinary work to address climate change and, as such, have made efforts to better coordinate existing and future endeavors between domains. The most recent changes to the Forest Resource Trust acknowledge the importance of integrating work accomplished by other agencies in developing conservation plans and strategies. They prioritize proposed projects located and identified in existing state plans.

Furthermore, the ODF began initial analyses of existing conservation strategies in Oregon, where specific actions taken on private forest lands are encouraged, but necessitate infrastructure to deliver financial and technical assistance. ODF could coordinate efforts and funds of various entities which have similar objectives in the same conservation area by identifying the role FRT might play in implementing those strategies (7).

As interest in carbon markets as a means of mitigating climate change has grown in the United States, the Board of Forestry has developed a vision for expanding ODF's role in carbon markets. In 2001, a law passed establishing authority for the Oregon Department of Forestry to aggregate offset credits from private landowners. It set up ODF as a potential aggregator of forestry carbon offsets by giving the State Forester the authority to enter into agreements with non-federal forest landowners for the purpose of marketing carbon offsets (8). To date, no progress has been made to implement this initiative.

Take Home Messages

Many of the lessons learned and challenges faced by the FRT may be useful for states currently designing programs to link small-scale forest landowners to carbon markets. Oregon's FRT provides an excellent model for addressing critical issues surrounding forest carbon credits, including additionality, setline a baseline, permanence, and leakage. Moreover, the FRT as a loan program provides assurance to carbon investors that oversight is being performed by the state. Landowners are not responsible for

measuring and reporting their project performance.

Carbon forest programs should aim to meet both ecological and social objectives. Oregon's FRT is a good model in this sense, as the program employs robust methods for addressing the ecological viability of carbon forest projects and is designed to be accessible to small-scale forest landowners. Jim Cathcart, who manages the program, encourages other states to "keep it simple" and look to existing program models to facilitate enrollment of family forest landowners (Jim Cathcart 2008, personal communication on April 21, 2008).

Adaptive management has proven to be essential in developing a program that links new and emerging markets to state and private sectors. Flexibility in planning and implementing the FRT may alleviate negative effects of unforeseen impacts and allow adjustments to a changing environment. However, while state government played a key role in facilitating the development and implementation of the program, critical players such as landowners and natural resource managers were not involved from the start. Earlier participation of key players could have improved initial success of the program.

Furthermore, ODF benefits from a long standing relationship with private landowners due to its involvement in other forestry activities (i.e. forest fire protection, forest regulation). ODF appears to profit from this situation when linking carbon markets to private landowners. However, not all state agencies and organizations have this existing history with their constituency, which could impede replicating Oregon's FRT in other parts of the country.

As the program adjusts to the changing environment, state partners continue to look ahead and anticipate new mechanisms to maximize sustainable forestry use. Future endeavors anticipate utilization of the forest's many benefits while seeking ecological health. Oregon continues to forge the way in climate adaptation by expanding eligible offset activities to include environmental restoration practices and attempting to address potential ecosystem services marketplace. In the future, the ODF envisages an incentive program which encourages landowners to grow timber longer and capture more ecosystem services. As the FRT matures and evolves, the hope is to garner increased involvement from family forest landowners throughout Oregon, to establish new forests on underproducing land, restore and maintain existing forests while providing access for small-scale landowners to markets like the nascent carbon market.

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