

# Grant and Loan Summaries: Resource Overview

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## ***Information Contained***

The information contained in this document includes loan and grant model details for an assortment of loan and grant programs both past and present. Each program is summarized in a single sheet overview of the grant program containing basic program information, targeted state of investment, program goals, eligibility criteria, and evaluation criteria. In addition, any special applicant validation due at the time of submittal is noted, along with performance measures for follow-up evaluation and any references on which the program is based.

## ***How to Use this Resource***

The grants contained in this document are not meant to represent all programs currently available or to direct applicants to the best source of funding. Rather, this provides a reference for the comparison of the structure of various loan and grant programs. The specific information summarized allows a quick examination of factors such as:

- Size of individual grants/loans compared with total funds available.
- The evolution of program goals and criteria over iterations of a program.
- Specific ways in which eligibility and evaluation criteria can be approached, from brief and abstract to detailed and specific.
- Resources used (if any) that may provide a basis for other programs.
- Differences in program approaches between states, agencies, and state versus national programs.

The summary information contained here is based on published requests for proposals and notices of funds available. These full references have been archived for any future analysis.

## ***Note on Information Sources***

The information contained in the following program summary sheets includes a collection of both directly quoted information and summaries from original grant documents.

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# Department of Energy, SBIR Phase 1

<b>Program</b>	SBIR phase 1	<b>Year</b>	FY2009
<b>Issuer</b>	Department of Energy	<b>Administrator</b>	Department of Energy
<b>Total Funds</b>	\$36 million	<b>Award Size</b>	\$100K
<b>Work Period</b>	6 – 9 months	<b>Grant or Loan</b>	Grant

## Targeted Stages of Commercialization

Feasibility Study

## Program Goals

Increase private sector commercialization of technology developed through DOE-supported research and development (R&D), stimulating technological innovation in the private sector, and improving the return on investment from Federally-funded research for economic and social benefits to the nation.

## Eligibility Criteria

- Must be a United States small business concerns (SBCs)
  - SBC criteria: For profit, at least 51% ownership and control is US entity, fewer than 500 employees including affiliates, R&D must be performed in US or US territories and possessions, > 67 % of work must be performed by SBC

## Evaluation Criteria

- Initial administrative screening
- DOE technical managers screening
  - Funding opportunity notice requirements, responsive to the topic and subtopic, sufficient information for a meaningful technical review, project entails research or for research and development and does not duplicate other previous or current work, high overall quality compared to other grant applications received in the same topic.
- Merit review
  - Strength of the scientific/technical approach as evidenced by innovativeness of idea and approach, significance of the challenge, thoroughness of the presentation.
  - Cost effectiveness as evidenced by the qualifications of the Principal Investigator, other personnel, and the level of adequacy of equipment and facilities; the soundness of the work plan to show feasibility of the concept; DOE investment justified by the level of proposed research effort.
    - Impact as evidenced by the technical and/or economic benefits of the project, project could lead to a marketable product or process, and the project could attract further funding.

## Application Validation / Applicant Due Diligence

n/a

## Performance Measures

Final report due at conclusion of grant

## Source/Basis of Grant Methods

Participating agencies conduct SBIR/STTR programs by reserving a small percent of their research and development budgets for funding agreements with small business concerns for R/R&D. Each agency, at its sole discretion, selects the technical topics and subtopics included in its Solicitation and selects its SBIR/STTR awards.

## Department of Energy, SBIR Phase 2

<b>Program</b>	SBIR phase 2	<b>Year</b>	FY2009
<b>Issuer</b>	Department of Energy	<b>Administrator</b>	Department of Energy
<b>Total Funds</b>	multiple \$million	<b>Award Size</b>	\$750K
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Phase II is the principal R&D effort, and only previous DOE Phase I grantees will be eligible to compete for subsequent Phase II continuation of their Phase I projects

### Program Goals

Increase private sector commercialization of technology developed through DOE-supported research and development (R&D), stimulating technological innovation in the private sector and improving the return on investment from Federally-funded research for economic and social benefits to the nation.

### Eligibility Criteria

- Must be a United States small business concerns (SBCs)
  - SBC criteria: For profit, at least 51% ownership and control is US entity, fewer than 500 employees including affiliates, R&D must be performed in US or US territories and possessions, at least 50 % of the research or analytical effort must be carried out by SBC.

### Evaluation Criteria

- Merit Review
  - Strength of the scientific/technical Approach as evidenced by innovativeness of idea and approach, significance of the challenge, thoroughness of the presentation.
  - Cost effectiveness as evidenced by the qualifications of the Principal Investigator, other personnel, and the level of adequacy of equipment and facilities; the soundness of the work plan to show feasibility of the concept; DOE investment justified by the level of proposed research effort.
  - Impact as evidenced by the technical and/or economic benefits of the project, project could lead to a marketable product or process, and the project could attract further funding.

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

Final report due at conclusion of grant

### Source/Basis of Grant Methods

Participating agencies conduct SBIR/STTR programs by reserving a small percent of their research and development budgets for funding agreements with small business concerns for R/R&D. Each agency, at its sole discretion, selects the technical topics and subtopics included in its Solicitation and selects its SBIR/STTR awards.

# National Science Foundation, SBIR Phase 1

<b>Program</b>	SBIR phase 1	<b>Year</b>	FY2009
<b>Issuer</b>	National Science Foundation	<b>Administrator</b>	National Science Foundation
<b>Total Funds</b>	Varies, multiple millions	<b>Award Size</b>	\$100K
<b>Work Period</b>	6 – 9 months	<b>Grant or Loan</b>	Grant

## Targeted Stages of Commercialization

Feasibility Study

## Program Goals

- Develop intellectual capital: Make awards for research which builds upon recent discoveries in basic sciences and engineering and provides opportunities for individuals who have, or are working toward, advanced scientific, engineering, or education degrees.
- Strengthen the physical infrastructure - Make awards which lead to development of new scientific, engineering, and education capability through commercialization of advanced instruments, new processes, and innovative software, etc

## Eligibility Criteria

- Must be a United States small business concerns (SBCs)
- SBC criteria: For profit, at least 51% ownership and control is US entity, fewer than 500 employees including affiliates, R&D must be performed in US or US territories and possessions, at least 67 % of the research or analytical effort must be carried out by SBC
- Principal Investigator (PI) must be employed by SBC; they can also be employed by an Academic or Non-Profit Organizations/Affiliations provided that they work no more than 49% full time for that organization.

## Evaluation Criteria

- Proposal must be responsive to the Solicitation
- Intellectual merit - Proposal will be reviewed to address how well it will advance science and engineering through research and education. Items evaluated are: approach, suggests or explores unique or ingenious concepts or applications; qualification of the team; sufficient access to resources, state of the art; broader impacts of study; commercial and societal benefits; market competitiveness of technology; leads to enabling technologies; future external financing/investment; participation of underrepresented groups; track record; and the development of a product or process as a result of the study.

## Application Validation / Applicant Due Diligence

n/a

## Performance Measures

Final report due at conclusion of grant

## Source/Basis of Grant Methods

Participating agencies conduct SBIR/STTR programs by reserving a small percent of their research and development budgets for funding agreements with small business concerns for R/R&D. Each agency, at its sole discretion, selects the technical topics and subtopics included in its Solicitation and selects its SBIR/STTR awards.

## National Science Foundation, SBIR Phase 2

<b>Program</b>	SBIR phase 2	<b>Year</b>	FY2009
<b>Issuer</b>	National Science Foundation	<b>Administrator</b>	National Science Foundation
<b>Total Funds</b>	multiple \$millions	<b>Award Size</b>	\$500K
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Phase II is the principal R&D effort, and only previous DOE Phase I grantees will be eligible to compete for subsequent Phase II continuation of their Phase I projects

### Program Goals

Increase private sector commercialization of technology developed through DOE-supported research and development (R&D), stimulating technological innovation in the private sector, and improving the return on investment from Federally-funded research for economic and social benefits to the nation.

### Eligibility Criteria

- Successful completion of Phase 1 award
- Must be a United States small business concerns (SBCs)
- SBC criteria: For profit, at least 51% ownership and control is US entity, fewer than 500 employees including affiliates, R&D must be performed in US or US territories and possessions, at least 50 % of the research or analytical effort must be carried out by SBC
- Principal Investigator (PI) must be employed by SBC; they can also be employed by an Academic or Non-Profit Organizations/Affiliations provided that they work no more than 49% full time for that organization.

### Evaluation Criteria

- Proposal must be responsive to the Solicitation
- Intellectual merit - Proposal will be reviewed to address how well it will advance science and engineering through research and education. Items evaluated are: approach, suggests or explores unique or ingenious concepts or applications; qualification of the team; sufficient access to resources, state of the art; broader impacts of study; commercial and societal benefits; market competitiveness of technology; leads to enabling technologies; future external financing/investment; participation of underrepresented groups; track record; advancement of NSF goals in research and education; and the development of a product or process as a result of the study.

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

Final report due at conclusion of grant

### Source/Basis of Grant Methods

Participating agencies conduct SBIR/STTR programs by reserving a small percent of their research and development budgets for funding agreements with small business concerns for R/R&D. Each agency, at its sole discretion, selects the technical topics and subtopics included in its Solicitation and selects its SBIR/STTR awards.

## ODOD - Manufacturing Energy Efficiency Incentives

<b>Program</b>	Mfg. Energy Efficiency Incentives	<b>Year</b>	FY2007
<b>Issuer</b>	ODOD	<b>Administrator</b>	ODOD Ohio Energy Office, Adv. Energy Prog.
<b>Total Funds</b>	n/a	<b>Award Size</b>	up to \$50,000
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Existing technology

### Program Goals

The goal of this NOFA is to increase the development and utilization of energy efficiency measures in Ohio in order to promote energy sustainability, a cleaner environment, and economic development.

### Eligibility Criteria

- Projects must be installed in Ohio, in a service area of an investor-owned electric distribution utility: American Electric Power, Duke Energy, First Energy and Dayton Power & Light.
- All project components must be new.
- Project equipment must NOT be ordered, purchased, or installed prior to having an executed grant agreement with the ODOD.
- Projects must be completed within 24 months of grant award.
- Energy efficiency must be demonstrated.
- Applicant must have participated in an EnVinta One-2-Five or Achiever diagnostic.
- Applicant must be in contract for services (or have completed those services) with a certified EnVinta facilitator and utilize the results of the EnVinta or Achiever diagnostic session to develop an energy management plan and technical opportunities assessment or provide documentation of inclusion of the results of the diagnostic session into the facilities energy management practices.
- Applicants must be manufacturing facilities in Ohio. Previous participants in One-2-Five or Achiever diagnostics also qualify.

### Evaluation Criteria

Energy efficiency must be demonstrated.

### Application Validation / Applicant Due Diligence

Applicant must have participated in an EnVinta One-2-Five or Achiever diagnostic.

### Performance Measures

n/a

### Source/Basis of Grant Methods

n/a

## ODOD - Renewable Energy Program

<b>Program</b>	Renewable Energy Program	<b>Year</b>	FY2008
<b>Issuer</b>	ODOD	<b>Administrator</b>	ODOD Ohio Energy Office, Advanced Energy Program
<b>Total Funds</b>		<b>Award Size</b>	up to \$200,000
<b>Work Period</b>	12 months	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Installation of existing systems

### Program Goals

The Ohio Department of Development's (ODOD) Ohio Energy Office (OEO) is seeking applications to implement renewable energy projects limited to solar electric, wind electric, and solar thermal systems for Commercial, Industrial, Institutional and Governmental entities in Ohio.

### Eligibility Criteria

- Commercial, industrial, institutional and governmental customer served by the following investor-owned utilities: AEP, First Energy, Duke Energy, or Dayton Power and Light
- Projects must be installed at an Ohio site, and connected to the electrical grid. No portable systems.
- No previous grants with the ODOD/ OEO for a period of one year after grant expiration.
- All project components must be new equipment and come with a manufacturer's warranty. It must NOT be ordered, purchased, or installed prior to having an executed grant agreement with the ODOD.
- All applicable permitting, licensing and codes must be followed.
- In jurisdictions that are not governed by local or state building regulations an electrician licensed by the Ohio Construction Industry Licensing Board (OCILB) must approve all electrical work, and a plumber or hydronics contractor licensed by the Ohio Construction Industry Licensing Board (OCILB) must approve all Solar Thermal systems.
- Solar PV projects must be installed by NABCEP certified installers in good standing with the Ohio Secretary of State and NABCEP.
- Solar PV and Wind Energy project components must be approved by the Underwriters Laboratory (UL).
- Wind Energy systems proposals must include the system's wind speed performance curves and average wind speed for the proposed site at the proposed hub height, and Wind Energy project towers and foundations must be stamped by a Registered Professional Engineer, licensed in Ohio and specializing in structural engineering.
- NABCEP certified installers and/or end use customers may submit applications.

### Evaluation Criteria

First come, first serve basis

### Application Validation / Applicant Due Diligence

Zoning approval letter

### Performance Measures

n/a

### Source/Basis of Grant Methods

n/a

## ODOD - Distributed Energy Resources

<b>Program</b>	Distributed Energy Resources	<b>Year</b>	FY2007
<b>Issuer</b>	ODOD	<b>Administrator</b>	ODOD Ohio Energy Office
<b>Total Funds</b>	n/a	<b>Award Size</b>	\$100,000
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Existing systems

### Program Goals

The Ohio Department of Development's (ODOD) Ohio Energy Office (OEO) is soliciting applications from interested and qualified applicants to implement distributed energy resources (DER) projects, including but not limited to industrial heat recovery, combined heat and power, and landfill or biomass methane for electric generation.

### Eligibility Criteria

- This initiative will focus on the utilization of DER clean burning technologies and DER renewable energy technologies. Projects from commercial, industrial, institutional and local government are eligible for funding.
- Projects must be installed in Ohio, in a service area of an investor-owned utility: American Electric Power, Duke Energy, First Energy and Dayton Power & Light.
- All project components must be new, and Project equipment must NOT be ordered, purchased, or installed prior to having an executed grant agreement with the ODOD.
- Previous recipients of OEO's DER grant program are not eligible.
- Eligible projects: Clean burning reciprocating engines (must meet California Standard), Industrial turbines, Micro-turbines, Innovative use of waste heat/CHP/Cogeneration, Landfill or biomass methane.
- Wind Energy systems proposals must include the system's wind speed performance curves and average wind speed for the proposed site at the proposed hub height.
- NABCEP certified installers and/or end use customers may submit applications; Grant to be awarded to end use customer. No project developers can receive funding in their name.

### Evaluation Criteria

- Criterion for evaluation includes: Dollars leveraged; Balance of financing committed; System efficiency; Project Cost/KW; Energy efficiency measures already completed; Value of demonstration project; and Reporting and monitoring
- Project Technology Specific Characteristics: Clean Air attributes – clean burning technologies only; Fuel Sustainability – Biomass/Landfill Methane only
- State of Ohio guidelines require that the grant be awarded to the entity that demonstrates most aptly the ability to perform the required activities, taking into consideration factors such as price and the evaluation criteria set forth in the NOFA. Geographic distribution of project funding may also be taken into consideration.

### Application Validation / Applicant Due Diligence

Proof of electric service provider; drawings, letters, and other materials as requested in technical worksheets.

### Performance Measures

n/a

### Source/Basis of Grant Methods

n/a

## Third Frontier-Advanced Energy Program 2008

<b>Program</b>	Advanced Energy Program	<b>Year</b>	FY2008
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD Technology and Innovation Division
<b>Total Funds</b>	\$21 million	<b>Award Size</b>	\$250,000 to \$1 million
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Early-mid stage (still in research & development)

### Program Goals

- To accelerate the development and growth of the advanced energy industry in Ohio by direct financial support to organizations seeking to commercialize new products, manufacturing processes or technologies, or to adapt or modify existing components or systems that can reduce the cost of advanced energy systems or address technical and commercialization barriers.
- Specific objectives supporting this goal are as follows:
  - To help Ohio companies achieve cost and performance standards that ultimate end-users of advanced energy technologies define as necessary for successful commercial applications;
  - To support development of advanced energy technologies that will result in the opportunity for significant employment in Ohio within 5 years of completing the project;
  - To help Ohio companies secure additional financial resources needed to commercialize their advanced energy related products, processes, components, and systems;
- To move advanced energy related products, manufacturing processes, components, and systems to the point of demonstrating a commercial prototype or actually entering the market with a product.

### Eligibility Criteria

- Lead Applicant: Ohio organization, for-profit, not-for-profit, government research institute, public body, educational institution, or Out-of-state for-profit company that pledges to locate within Ohio.
- Must include at least one collaborator.
- Project: Developing and commercializing new products, manufacturing processes, or technologies, or adapting Ohio products or systems for use in advanced energy systems which meet stated objectives.

### Evaluation Criteria

- Proposals passing the administrative review will be evaluated based on responsiveness to all the requirements of this RFP. They will be evaluated by the following criteria: Consistency with Roadmaps for Success; Consistency with State and Regional Priorities; Degree of Customer Readiness; Degree of Sustainable Competitive Advantage (Flywheels); Demonstrated Leadership Assets; Identified Stage of Market Development; Impact on Ohio; Importance of Key Existing and Emerging Ohio Industry Drivers; Level of Scientific Merit; Past Performance (if applicable); Potential for Leverage; Size of Opportunity; and Vision for Success

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

Required quarterly reporting for first 3 years and annual reporting through 5 years.

### Source/Basis of Grant Methods

Proposal structure based on context of "Commercialization Framework" and, while the program remained technology neutral, areas presenting opportunities for investment were identified by Taratec Corporation and noted as examples.

## Third Frontier-Advanced Energy Program 2009

<b>Program</b>	Advanced Energy Program	<b>Year</b>	FY2009
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD Technology and Innovation Division
<b>Total Funds</b>	\$13 million	<b>Award Size</b>	\$250,000 to \$1 million
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Early-mid stage (still in research & development)

### Program Goals

- Accelerate the development and growth of the advanced energy industry in Ohio by direct financial support to organizations seeking to commercialize new products, commercialize manufacturing processes or technologies, adapt or modify existing components/ systems to reduce system cost, or address technical and commercial barriers.
- Specific objectives supporting this goal are as follows:
  - To help Ohio companies achieve cost and performance standards that ultimate end-users of advanced energy technologies define as necessary for successful commercial applications;
  - To support development of advanced energy technologies that will result in the opportunity for significant employment in Ohio within 5 years of completing the project;
  - To help Ohio companies secure additional financial resources needed to commercialize their advanced energy related products, processes, components, and systems; and
  - To move advanced energy related products, manufacturing processes, components, and systems to the point of demonstrating a commercial prototype or actually entering the market with a product.

### Eligibility Criteria

- Lead Applicant: Ohio organization, for-profit, not-for-profit, government research institute, public body, educational institution, or Out-of-state for-profit company that pledges to locate within Ohio.
- Must include at least one collaborator.
- Project: Developing and commercializing new products, manufacturing processes, or technologies, or adapting Ohio products or systems for use in advanced energy systems which meet stated objectives.

### Evaluation Criteria

Proposals passing the administrative review will be evaluated based on responsiveness to all the requirements of this RFP and will be evaluated by the following criteria: Consistency with Roadmaps for Success; Consistency with State and Regional Priorities; Degree of Customer Readiness; Degree of Sustainable Competitive Advantage (Flywheels); Demonstrated Leadership Assets; Identified Stage of Market Development; Impact on Ohio; Importance of Key Existing and Emerging Ohio Industry Drivers; Level of Scientific Merit; Past Performance (if applicable); Potential for Leverage; Size of Opportunity; and Vision for Success

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

After award and within 30 days of execution of grant agreement, grantee submits a forecast of A, B, and C metrics for ODOD's approval. These A, B, and C metrics are defined for specific types of project milestones (C), tangible evidence (B), and transitions (A). Required quarterly reporting for first 3 years and annual reporting through 5 years.

### Source/Basis of Grant Methods

Proposal structure based on context of "Commercialization Framework" and, while the program remained technology neutral, areas presenting opportunities for investment were identified by Taratec Corporation and noted as guidance.

## Third Frontier - Fuel Cell Program

<b>Program</b>	Fuel Cell Program	<b>Year</b>	FY2009
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD Technology and Innovation Division
<b>Total Funds</b>	\$11 million	<b>Award Size</b>	\$250,000 to \$1 million
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Early-mid stage (still in research & development)

### Program Goals

Accelerate the development and growth of the fuel cell industry in Ohio by direct financial support to organizations.

- **General Objectives:** Discovery of new knowledge having specific commercial objectives for new products, processes, or services; commercialize new products, manufacturing processes, or technologies, or adapt or modify existing components or systems to reduce cost or address other barriers; demonstrate market readiness.
- **Specific objectives:** Meet a recognized and specific need, achieve cost and performance standards necessary for commercial applications, significant employment in Ohio within 5 years, secure additional financial resources, demonstrate a commercial prototype or actually enter the market, Market Readiness Demonstration Projects

### Eligibility Criteria

- **Lead Applicant:** Ohio organization, for-profit, not-for-profit, government research institute, public body, educational institution, or Out-of-state for-profit company that pledges to locate within Ohio

### Evaluation Criteria

- **Project Types:**
  - Meet a recognized, specific fuel cell need. Preference for 2<sup>nd</sup> and 3<sup>rd</sup> generation fuel cell technologies
  - Develop/commercialize products, processes, or technologies reduce the cost of fuel cells or commercialization barriers. Materials, components, instrumentation, controls, sensors, and systems
  - Modifying components/systems produced in Ohio to reduce cost or address tech. or comm.. barriers
  - Demonstration projects in Ohio that maximize incorporation of Ohio components into fuel cell systems.
- **Technology Choice:** No particular fuel cell technology is favored over another. Will follow guidance from federal priorities. Lead Applicant to provide convincing, and externally validated evidence that an alternative proposed technology can meet government and industry standards for cost and performance.
- **Cost share requirement** - one dollar for every two dollars of State Grant Funds requested
- **Criteria Priority:** The following criteria have the highest relevance and weighting for the TFFCP: Level of Scientific Merit; Alignment of the Proposal with the goals of Section 3.2 of this RFP; Quality of responses to the requirements of this RFP; Compliance with this RFP; Past Performance (if applicable)

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

After award and within 30 days of execution of grant agreement, grantee submits a forecast of A, B, and C metrics for ODOD's approval. These A, B, and C metrics are defined for specific types of project milestones (C), tangible evidence (B), and transitions (A). Required quarterly reporting for first 3 years and annual reporting through 5 years.

### Source/Basis of Grant Methods

Proposal structure based on context of "Commercialization Framework" and, while the program remained technology neutral, a fuel cell roadmap was created by Taratec Corporation and used as guidance.

## Third Frontier - Innovation Ohio Loan Fund

<b>Program</b>	Innovation Ohio Loan Fund	<b>Year</b>	FY2007
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD
<b>Total Funds</b>	n/a	<b>Award Size</b>	\$500,000 - \$3 million
<b>Work Period</b>	4-7 years (negotiable)	<b>Grant or Loan</b>	Loan

### Targeted Stages of Commercialization

Early stage

### Program Goals

- To assist existing Ohio companies to develop next generation products and services within certain Targeted Industry Sectors by financing the acquisition, construction and related costs of technology, facilities and equipment. Ohio’s manufacturing sector will be a key target of this program. The IOF provides competitive financing terms on loans to finance projects that will positively impact Ohio by creating high-value jobs, increased tax revenues and improve the economic welfare of the State.

### Eligibility Criteria

- Established Ohio companies that have: A recent history of positive cash flow; A minimum of three years of operating history; and have attracted or are likely to attract additional third party capital to the project.
- Under limited circumstances, a company that does not have a recent history of positive cash flow may be considered if it has: Developed a proven product for a proven market; significant customer orders and reasonable prospects for rapid sales growth; and obtained the financial backing of professional investors and has reasonable prospects of continued backing from such investors. The Ohio Department of Development may require additional equity investment in the company as a condition to granting a loan.

### Evaluation Criteria

- Applications will be reviewed by both the ODOD and an outside reviewer as outlined in the IOF Loan Application. Factors that will be considered include:
  - Number of high-value jobs to be created from the successful commercialization of a new product;
  - Level of risk associated with the commercialization of the new product or service;
  - Degree to which the applicant has attracted or will be able to attract additional third party capital;
  - Degree to which the company’s business plan identifies the market need and demonstrates a feasible plan for serving that need; and
  - Level of financial risk and ability of the borrower to repay the loan.

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

After award and within 30 days of execution of grant agreement, grantee submits a forecast of A, B, and C metrics for ODOD’s approval. These A, B, and C metrics are defined for specific types of project milestones (C), tangible evidence (B), and transitions (A). Required quarterly reporting for first 2 years and annual reporting through 5 years.

### Source/Basis of Grant Methods

Proposal structure based on context of “Commercialization Framework”.

## Third Frontier – Wright Projects

<b>Program</b>	Wright Projects	<b>Year</b>	FY2008
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD
<b>Total Funds</b>	\$21 million (6-10 grants)	<b>Award Size</b>	\$1-3 million
<b>Work Period</b>	3 years	<b>Grant or Loan</b>	grant

### Targeted Stages of Commercialization

Mid-stage; Capital investments

### Program Goals

- The specific goals of the WP Program are:
  - To make Ohio the national and international leader in how colleges and universities support the commercialization needs of companies in Ohio; and,
  - To make Ohio a model that others follow with respect to providing capital to its colleges and universities for use in commercial, research, and educational areas.
- The specific objectives of the WP Program are:
  - To support major capital acquisitions and improvements at an Ohio college or university or not-for-profit research institution to support specifically defined near term commercialization objectives of one or more Ohio for-profit companies;
  - To achieve commercial market entry within three (3) years of the Project award;
  - To support projects that will create wealth and employment opportunities within Ohio; and,
  - To support long-term use of capital to enhance other applied research, development, and demonstration (RD&D) programs, or education and training programs for technical workers in the targeted technology areas.

### Eligibility Criteria

- Project: address any of the following opportunity areas or combinations thereof: Advanced Materials; Information Technology; Instruments, Controls and Electronics; and, Power and Propulsion.
- Lead Applicant: Ohio college/university, or non-profit public or private research organization or public body
- Must include at least one for-profit collaborator with principle place of business in Ohio.

### Evaluation Criteria

- Proposals passing the administrative review will be evaluated by external reviewers based on responsiveness to all the requirements of this RFP and to the following Evaluation Criteria: Consistency with State and Regional Priorities; Degree of Customer Readiness; Demonstrated Leadership Assets; Existence of Supporting Workforce; Identified Stage of Market Development; Impact on Ohio; Level of Scientific Merit; Past Performance (if applicable); Potential for Leverage; Potential for Products; Receptive Capital Markets; Size of Opportunity; Vision for Success

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

After award, grantee and ODOD will incorporate of A, B, and C metrics into project plan to be used for project management and reporting. Required quarterly reporting for first 3 years and annual reporting through 6 years.

### Source/Basis of Grant Methods

Proposal structure based on context of "Commercialization Framework".

## Third Frontier - Pre-Seed Fund Initiative

<b>Program</b>	Pre-Seed Fund Initiative	<b>Year</b>	FY2007
<b>Issuer</b>	Ohio Third Frontier Commission	<b>Administrator</b>	ODOD
<b>Total Funds</b>	n/a	<b>Award Size</b>	\$1-2 million
<b>Work Period</b>	Up to 10 years	<b>Grant or Loan</b>	grant

### Targeted Stages of Commercialization

For pre-seed funds investing in early-stage companies

### Program Goals

- Ohio to remain a national leader, as acknowledged by investment professionals, in providing financial and management support to early stage technology companies.
- To provide capitalization to Funds that invest in promising pre-seed stage companies
  - to complete the tasks to transition from the imagining and incubating phases of the framework
- prepare companies for seed stage investment from angel, strategic or venture capital
- Each Fund should provide enhanced management services to improve marketing and management and to provide technical and commercial expertise to its portfolio companies.
  - Coaching pre-seed companies is at least as important as providing capital,
- Award funds to invest in Ohio companies with technologies in the imagining, incubating, and to a lesser extent, demonstrating phases of the commercialization framework
  - Investments will be in companies that not yet sufficiently mature to attract venture financing.

### Eligibility Criteria

- The legal entity of the Fund must have a federal tax identification number; The Fund must be based in, or have a principle place of business in, Ohio; A significant portion of the overall Fund focus must include benefit to Ohio and Ohio businesses
- Above criteria must be met throughout the grant term and for three years thereafter
- Minimum Cost Share of 2:1

### Evaluation Criteria

- Proposals passing the administrative review will be evaluated based on the responsiveness to all the requirements of this RFP and to the evaluation criteria described in the following sections.
- Fund Conditions (40 Points)
  - Fit the intent of the program and benefit the citizens of the State of Ohio
  - Provide evidence that the Fund has access to and can attract stage-appropriate deal flow
  - Business Creation Environment—In the communities/regions/areas to be served by the Fund, the extent of: 1) existing technology-based businesses, 2) an active investment community seeding technology-based companies, 3) private and public economic development programs encouraging business formation and growth, and 4) unique and continuing sources of quality investment opportunities
  - Commit that its primary investment focus will be on Ohio deal flow and Ohio investments
  - Integrated A, B, and C metrics into day-to-day project management and performance evaluations
  - Demonstrate an understanding of the Third Frontier Pre-Seed Fund’s primary objectives for company investments, i.e. companies in the imagining, incubation and (to a lesser extent) the demonstration phases of commercialization?
  - Include credible resources beyond capital investments to provide Enhanced Management Services to portfolio companies and perform Due Diligence with prospective portfolio companies?
- Financial and Structural Information (20 points)
  - Budget and budget detail reasonable and consistent with the activities described in the proposal
  - Proposed management expenses reasonable and cost effective

- **Fund Organization/Operation (40 points)**
  - Proposal provides evidence that the Fund’s structure can attract capital, conduct diligence, provide portfolio assistance (enhanced management services) and manage investments for the benefit of the State of Ohio
  - Proposal demonstrates the likelihood of success for the Fund based on the proposed activities, work plan, management, and resources
  - Proposal demonstrate that the principals, employees, and to a lesser extent the Cost Share providers have been involved in the creation of pre-seed technology-based start-up companies
  - Principals or employees been involved in pre-seed, seed, early-stage, growth stage or mezzanine venture Funds, commercial banking related to early-stage companies, angel Funds, or government related economic development that involves investments in very early stage technology companies
  - Fund manager(s) have a history of success in pre-seed or early stage technology based start-up investing or in raising a Fund to invest in early-stage technology-based companies
  - General partners, principals, employees, and to some extent the limited partners, have relevant contacts to help portfolio companies in: 1) recruiting senior level managers; 2) providing sales call contacts; 3) introducing strategic partners; and 4) making press and public relations contacts
  - Firm commitments by limited partners or Cost Share providers to invest capital in the proposed Fund, and willingness to serve on the advisory board (or equivalent) and actively participate in other activities critical to the proposed Fund’s success
  - Proposal provides evidence that a professional management team will manage the Fund
- **Existing Fund Evaluation (-20 to +20 Points)** Evaluation criteria will be applied only to those proposals from Applicants with a current or prior Fund that received grant monies.
  - Proposed Fund builds upon the successes and failures of the earlier Fund
  - Earlier Fund’s investments attracted new, smart and meaningful co-investments and follow on investments to its portfolio companies
  - Earlier Fund successfully participated with portfolio companies to attract additional investment
  - Earlier Fund provided or facilitated effective coaching (i.e. Enhanced Management Services) to its portfolio and perspective portfolio companies
  - Earlier Fund met its commitments to the State of Ohio (as outlined in the original RFP, applicant proposal and grant agreement) regarding stage of company investments, types and technologies of companies sought, size of investment, target exit strategies, Due Diligence, timing and coaching of portfolio companies
- **Evaluation of Use of Grant Monies for Enhanced Management Services and/or Due Diligence**
  - For those proposals that the evaluators present to the Third Frontier Commission for possible funding, the evaluators will separately recommend whether those proposals should be allowed to use grant monies for Enhanced Management Services and/or Due Diligence based upon the following criteria:
    - Opportunity cost analysis of the proposed Due Diligence and/or enhanced management services shows the proposed spending is beneficial to the Fund and objectives of the Pre-Seed Initiative
    - Is the plan to utilize grant monies for these purposes cost efficient and cost effective?

**Application Validation / Applicant Due Diligence**

n/a

**Performance Measures**

Required quarterly and annual reporting for grant term.

**Source/Basis of Grant Methods**

n/a

## DOE–Federal Loan Guarantees; Energy Projects

<b>Program</b>	Federal Loan Guarantees, Adv. Engy	<b>Year</b>	2008
<b>Issuer</b>	US Department of Energy	<b>Administrator</b>	US Department of Energy
<b>Total Funds</b>	\$10,000,000,000	<b>Award Size</b>	varies
<b>Work Period</b>	n/a	<b>Grant or Loan</b>	Loan Guarantee

### Targeted Stages of Commercialization

Innovative energy efficiency, renewable energy, and advanced transmission and distribution projects

### Program Goals

- Three general project types: 1. Manufacturing; 2. stand-alone; 3. large-scale integration
- May combine multiple eligible technologies in accordance with a staged development scheme.
- Primary goals and objectives desired of each of the above project type categories are to achieve:
  - Greatest impact in/on: reducing air pollutants or anthropogenic emissions of greenhouse gases, The lowest cost of delivered energy based on the costs of the full supply chain, minimizing new infrastructure, reducing reliance on insecure sources of energy, reducing infrastructure vulnerabilities, fastest time to project completion; widest variety of New or Significantly Improved Technologies employed
  - In the case of large-scale integration, manufacturing, or stand-alone projects, the extent the proposed technology employed constitutes a New or Significantly Improved Technology, the most competitive or efficient use of the loan guarantee issued under Title XVII; The readiness of the New or Significantly Improved Technology to be employed commercially, replicated and available for further commercial use in the U.S.

### Eligibility Criteria

**Eligible Project:** a project located in the United States that employs a New or Significantly Improved Technology that is NOT a Commercial Technology.

### Evaluation Criteria

Technical Relevance and Merit – 10% (employs New or Significantly Improved Technologies as compared to Commercial Technologies in service in the U.S. at the time the Term Sheet is issued); Applicant Capabilities, Technical Approach and Work Plan – 20%; Environmental and Energy Security - 20%; Creditworthiness of the project – 30%; Construction Factors - 10%; Legal and Regulatory Factors - 10%

### Application Validation / Applicant Due Diligence

An in-depth review will include analysis of the technical, business and financial plans, proposed organizational structure and staffing, major contractors, vendors and engineering and construction entities. If any material changes occur, the applicant must disclose those changes which may lead to changes in DOE’s original analysis and conclusions.

### Performance Measures

**Progress Reports:** Report to DOE during the construction and start-up phases on a monthly basis comparing actual timing, cost, and financing against the original budget and previous month. Explain reason(s) for any significant variance(s) during the month and likely impact on the project going forward. During operational phase, provide financial statements prepared in accordance with US GAAP to DOE on a quarterly basis (income statement, balance sheet and cash flow statement), with certification of truth and correctness. Until guaranteed portion is fully repaid, applicant to inform DOE expeditiously of any condition potentially having a material adverse effect on the project. DOE reserves the right to require submission of additional information as it deems necessary.

### Source/Basis of Grant Methods

n/a

## DOE State Energy Program Formula Grants

<b>Program</b>	State Energy Program Formula Grants	<b>Year</b>	FY2008
<b>Issuer</b>	US Department of Energy	<b>Administrator</b>	National Energy Technology Lab
<b>Total Funds</b>	\$33 million	<b>Award Size</b>	Varies – 56 projects
<b>Work Period</b>	1 budget cycle (1 year)	<b>Grant or Loan</b>	Grant

### Targeted Stages of Commercialization

Middle to Late stage

### Program Goals

- Purpose: To establish grant guidance and management information for the State Energy Program formula grants for PY 2008 and provide the final PY 2008 allocations.
- For States to develop strategies that align their goals and objectives to: the State Energy Program Strategic Plan; the Energy Policy Act of 2005 (EPAAct) goal of increasing energy efficiency by 25 percent by 2012; the Advanced Energy Initiative (AEI); and the Energy Independence and Security Act of 2007 (EISA).
- For States to continue directing their PY 2008 planning efforts towards market transformation efforts and actions that align with national goals. Market transformation is defined as: “Strategic interventions that cause lasting changes in the structure or function of a market or the behavior of market participants, resulting in an increase in adoption of energy efficiency and renewable energy products, services, and practices.”
- DOE has established the following objectives: Transform energy markets in partnership with States to accelerate near-term deployment of energy efficiency and renewable technologies; Promote a portfolio of energy efficiency and renewable energy solutions to meet U.S. energy security, economic vitality, and environmental quality objectives; Strengthen core State energy programs to develop and adopt leading market transformation initiatives.

### Eligibility Criteria

- Eligibility for award is restricted to States, Territories, and the District of Columbia (hereinafter “States”).
- States must contribute (in cash, in kind, or both) an amount no less than 20% of their total Federal formula award.

### Evaluation Criteria

- Applications under this funding opportunity will be reviewed and awarded in accordance with the final 2008 Formula Allocations as set forth in the State Energy Program Notice 08-01, Attachment 1.
- Master File should include: an explanation of how implementing the plan will conserve energy, how the State will measure progress, how the program activities will achieve these goals and how the plan satisfies the minimum criteria for the required (mandatory) activities; and a plan for State monitoring that describes how the State conducts the administrative and programmatic oversight for programs implemented by other agencies, contractors, or sub-recipients of financial assistance. A description of how the State will achieve the new energy efficiency goal of 25 percent by 2012 shall be included here. If available, include key elements of the State’s Strategic Plan.
- The Annual File section of the State Plan describes each market area and program activity for which the State requests financial assistance for a given year, including budget information and milestones for each activity, and the intended scope and goals to be attained either qualitatively or quantitatively.

### Application Validation / Applicant Due Diligence

n/a

### Performance Measures

Required progress, financial, and closeout reports.

### Source/Basis of Grant Methods

Title III, Energy Policy and Conservation Act as amended; Consolidated Appropriations Act, 2008

# DOE - Solid-State Lighting Product Development Funding

<b>Program</b>	Solid-State Lighting Product Development Funding	<b>Year</b>	FY2008
<b>Issuer</b>	US Department of Energy	<b>Administrator</b>	US Department of Energy
<b>Total Funds</b>	\$7,500,000	<b>Award Size</b>	\$400K or \$900K depending on program area
<b>Work Period</b>	2 years	<b>Grant or Loan</b>	Grant

## Targeted Stages of Commercialization

Early stage

## Program Goals

The objective of this Announcement is product development of general illumination SSL sources, luminaires, and enabling products. This Announcement seeks to advance and promote the collaborative atmosphere of the LR&D SSL Program to identify potential product concepts; and incorporate into product supportive technologies that are novel or that fill technology voids or that otherwise represent a technological advancement of SSL Products. The following is a list of Program areas of interest: LED Based Integrated Luminaire; High Efficiency LEDs or Arrays; Phosphors or Encapsulants; Electronics Development; Organic Light Emitting Diode (OLED) Lighting Panel; Low cost substrates and encapsulation for OLEDs; Off-Grid SSL Products

## Eligibility Criteria

- All types of domestic entities are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501 (c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
- The cost share must be at least 20% of the total allowable costs of the project (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable costs of the projects) and must come from non-Federal sources unless otherwise allowed by law.

## Evaluation Criteria

- Initial Review Criteria. Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the funding opportunity announcement.
- Merit Review Criteria. Applications submitted in response to this funding opportunity will be evaluated and scored in accordance with the criteria and weights listed below:
  - TECHNICAL MERIT (CRITERION 1) WEIGHT: 40%
    - Validity of the product's potential to fill the proposed need or problem identified in the Funding Opportunity Announcement Program Areas of Interest, ability to address key risks, and technical superiority over currently available products. Likelihood of technical success and realism of stated goals.
    - Validity of the proposed approach, the likelihood to impact and have success in the marketplace, the scientific merit of the key technology issues addressed, and the proposed technical innovation and its relevance to the stated objectives.
    - Clarity, reasonableness and applicability of proposed milestones and success criteria as related to MYPP goals for each interval of the proposed effort with special emphasis on the descriptive, qualitative and quantitative milestone aspects.
    - Thoroughness and feasibility of the proposed Statement of Project Objectives (SOPO) and the anticipated outcomes and results.
  - APPLICANT AND PARTICIPANT ROLES AND CAPABILITIES (CRITERION 2) WEIGHT: 20%
    - Evidence of current corporate experience and success in similar projects which led to successful technology development and commercialization.

- Experience and availability of key personnel to complete the proposed project, including personnel involved in technical development and commercialization.
- Legitimacy of the proposed labor hours and categories proposed for the work plan.
- Description and explanation of any subcontracting effort.
- Adequacy (quality, availability and appropriateness) of facilities and equipment to accommodate the proposed project.
- INDUSTRIAL INVOLVEMENT AND COMMERCIALIZATION POTENTIAL (CRITERION 3) WEIGHT: 20%
  - Soundness of the commercialization strategy for the proposed product. Evidence, such as commitment letters, that show involvement from business sectors and/or institutional alliances and the ability to execute the commercialization strategy.
  - Demonstrated viability and practicality of the proposed product to meet the needs of the target market in a cost effective manner without major market restructuring considering potential technical, regulatory, economic, environmental, production or other issues impacting market success. Explanation of any variation from the performance and/or price projections outlined in the Announcement.
  - Degree to which the proposed technology or product will be substantially manufactured in the United States.
- ENERGY, ENVIRONMENTAL, AND ECONOMIC BENEFITS (CRITERION 4) WEIGHT: 20%
  - Legitimacy and impact of the energy benefits calculated using the “Guide for Evaluation of Energy Savings Potential – Solid-State Lighting Research and Development” (contained in Appendix A of this announcement), economic benefits as it pertains to the market potential for the proposed technology.
- Other Selection Factors. the following program policy factors will also be considered in the selection process:
  - It may be desirable to select for award a group of projects which represents a diversity of technical approaches and methods;
  - It may be desirable to support complementary and/or duplicative efforts or projects, which, when taken together, will best achieve the research goals and objectives;
  - It may be desirable to select different kinds and sizes of organizations in order to provide a balanced programmatic effort and a variety of different technical perspectives;
  - It may be desirable to select project(s) of less technical merit than other project(s) if such a selection will optimize use of available funds by allowing more projects to be supported and not be detrimental to the overall objectives of the program.
  - It may be desirable to select project(s) that reduce Federal investment and maximize corporate commitment as demonstrated by cost share levels that exceed the required 20%.
  - The above factors will be independently considered by the Selection Official in determining the optimum mix of applications that will be selected for support. These policy factors will provide the Selection Official with the capability of developing, from the competitive funding opportunity, a broad involvement of organizations and organizational ideas, which will both enhance the overall technology research effort and upgrade the program content to meet the goals of DOE.

#### Application Validation / Applicant Due Diligence

n/a

#### Performance Measures

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, found on the NETL Business Page at <http://www.netl.doe.gov/business/forms/FederalAssistanceReportingChecklistExample.pdf>.

#### Source/Basis of Grant Methods

n/a

# USDA - Renewable Energy Systems and Energy Efficiency Improvements Program

<b>Program</b>	Renewable Energy Systems and Energy Efficiency Improvements Program	<b>Year</b>	FY2009
<b>Issuer</b>	USDA	<b>Administrator</b>	ODOD Technology and Innovation Division
<b>Total Funds</b>	n/a	<b>Award Size</b>	Grants: \$1,500 - \$500,000 Guaranteed Loans: \$5,000 - \$10 million
<b>Work Period</b>	n/a	<b>Grant or Loan</b>	Grants, Guaranteed Loans

<b>Targeted Stages of Commercialization</b>
Existing technology

<b>Program Goals</b>
Promote energy efficiency and renewable energy for agricultural producers and rural small businesses

<b>Eligibility Criteria</b>
<ul style="list-style-type: none"> <li>Applicants must be either an agricultural producer or a small business. This program excludes residential purposes. The project must be located in a rural area.             <ul style="list-style-type: none"> <li>Agricultural Producers: An individual or entity directly involved in the production of agricultural products and 50% or greater of their gross income is derived from the agricultural production.</li> <li>Small Business: A private entity, including a sole proprietorship, partnership, corporation, and cooperative. Municipal or Tribal electric utilities may also qualify. Must meet SBA small business size standards, including aggregate of affiliated and subsidiary entities; excludes other non-profit entities.</li> <li>Rural: All areas other than a city with a population greater than 50,000 and urbanized area contiguous and adjacent to such city.</li> </ul> </li> <li>Eligible applicants may seek loan guarantees to cover up to 50% of a project's cost, not to exceed \$10 million. Grants are available for up to 25% of a project's cost, not to exceed \$250,000 for energy efficiency improvements and \$500,000 for renewable energy systems.</li> <li>Eligible uses: Purchase and installation of equipment, <i>except</i> ag tillage equipment/vehicles (post-application); Construction (post-application); Feasibility studies and business plans; Professional service fee, <i>excluding</i> application preparation; Permit fees and energy audits</li> </ul>

<b>Evaluation Criteria</b>
n/a

<b>Application Validation / Applicant Due Diligence</b>
n/a

<b>Performance Measures</b>
n/a

<b>Source/Basis of Grant Methods</b>
n/a

