

Emerging Energy Technology Forum

Programs & Opportunities for Alaska





Denali Commission

Denali L. Daniels, MPA

Senior Energy Program Manager

Denali Commission Energy Program



- ❖ Federal Agency 1998
- ❖ Bulk Fuel & Rural Power Systems
- ❖ Energy Policy Act 2005
- ❖ Federal State Partnerships
- ❖ Renewable Energy Fund
- ❖ Emerging Energy Technology Fund

Background – Emerging Tech Funding

- ❖ Draft legislation
- ❖ Available funds for renewable/alternative
- ❖ Emerging technologies – gap
- ❖ Pilot projects
 - ❖ High Voltage Direct Current (HVDC)
 - ❖ Eagle In-river Hydrokinetic

Round “0” – Solicitation Process

- ❖ \$4m dedicated to 2 phased solicitation
- ❖ Eligibility followed criteria in legislation
 - ❖ Commercially viable in Alaska within 5 years
 - ❖ Foreseeable replication statewide
 - ❖ Reduce energy cost/consumption for Alaskans
 - ❖ Technical Advisory Committee

Review Process

- Over 50 submissions
- 15 Invited to submit full proposals
- Review committee recommended 8 projects

Round “0” – Award Process

- ❖ Alaska Center for Energy and Power
 - ❖ Program Partner Model
 - ❖ Direct grant for data collection and reporting

Lessons Learned



- ❖ Scope revisions
- ❖ Data collection/reporting roles and responsibilities
- ❖ Targeted technologies

Denali Commission Future Role

- ❖ Seat on Advisory Committee
- ❖ FY11 DRAFT Work Plan = \$2.4m
- ❖ Continue Federal/State Partnership
 - ❖ Federal Agency Relations
- ❖ Address gaps

Emerging Energy Technologies

...accepting the torch

Emerging Energy Technology Forum
Juneau
February 14, 2011



Objective:

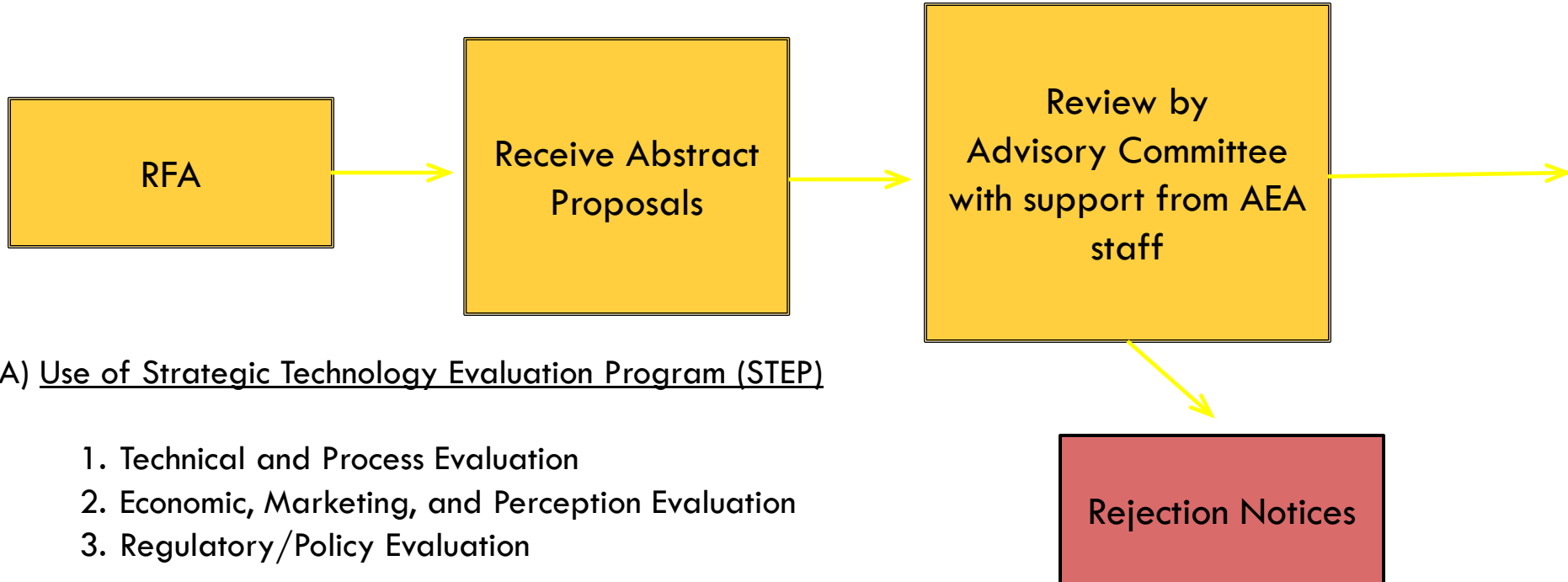
“...to promote the expansion of energy sources available to Alaskans...”

AS 42.45.385(a)

EETF Goals:

- 1. Clear and rigorous application & review process**
- 2. Constructive technical & economic oversight of projects**
- 3. Development of entities to continue deployment**

Overview of Process



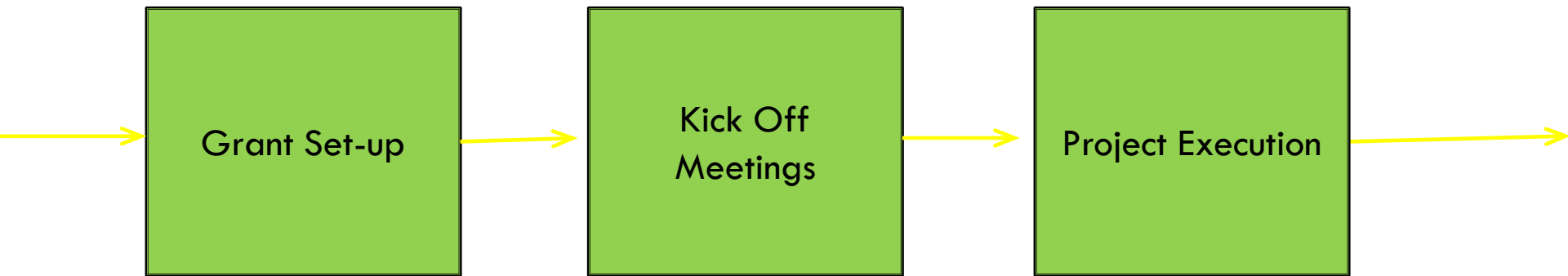
A) Use of Strategic Technology Evaluation Program (STEP)

1. Technical and Process Evaluation
2. Economic, Marketing, and Perception Evaluation
3. Regulatory/Policy Evaluation

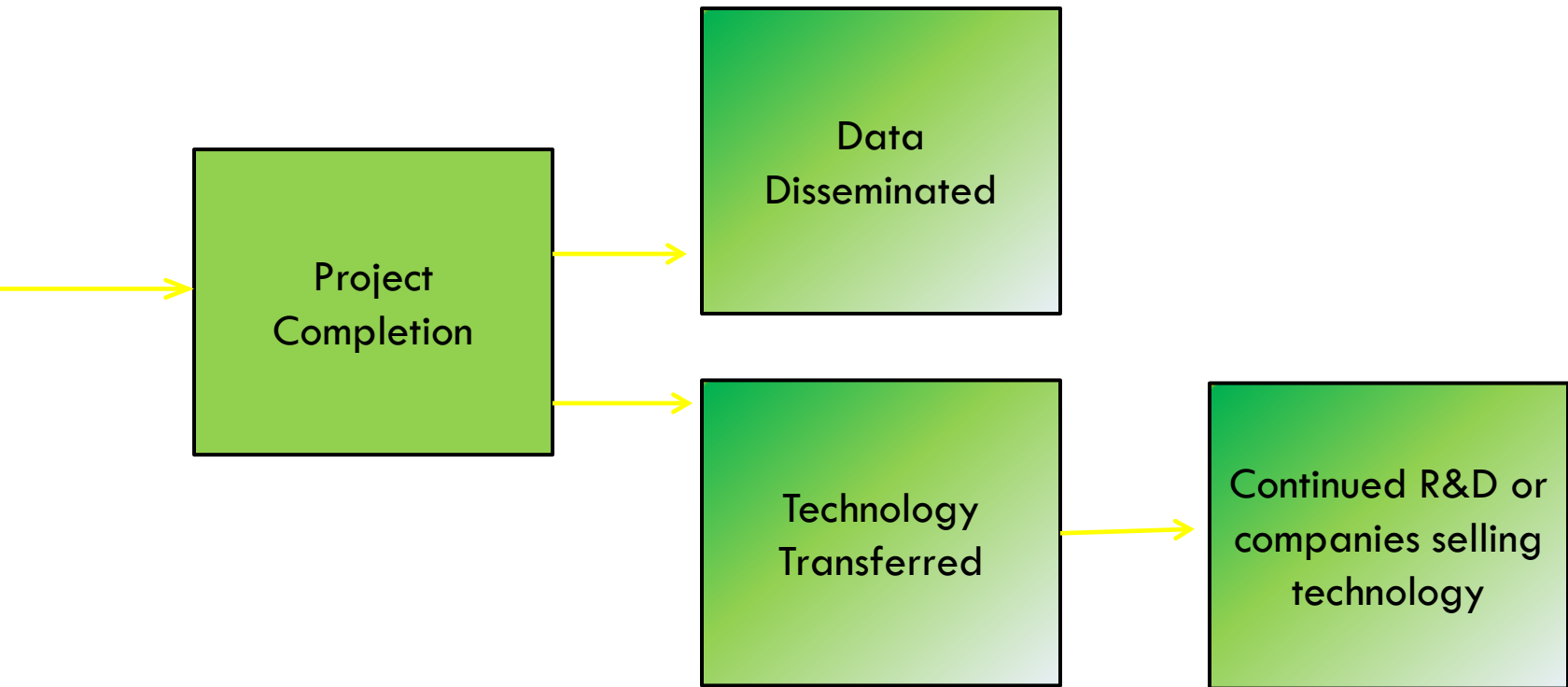
B) Explicit Abstract and Formal Application Requirements

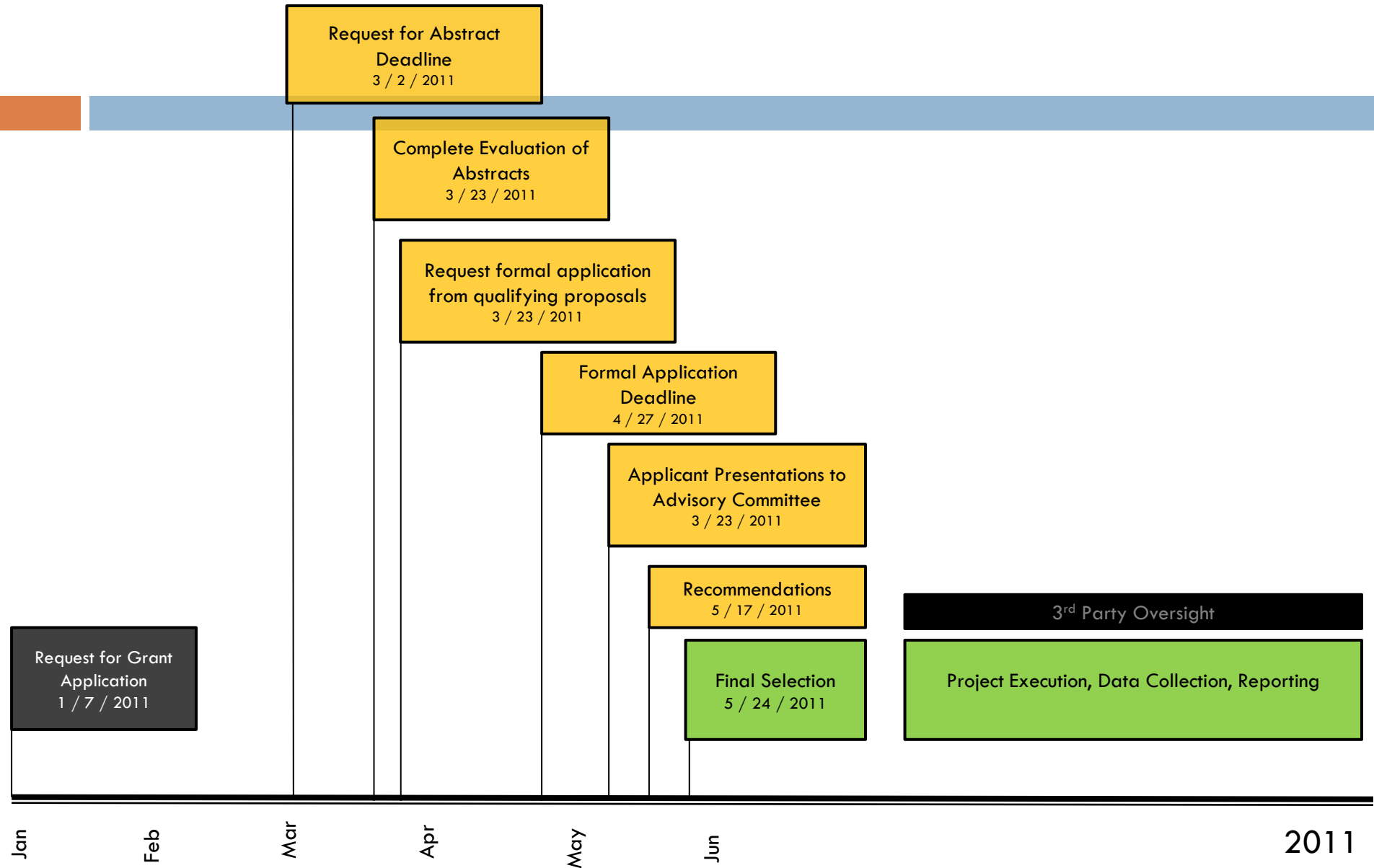
C) Prescribed Selection Criteria

Overview of Process (cont'd)



Overview of Process (cont'd)





Thank you

Barbara Triplett

Program Manager – EEFT, Geothermal, Hydrokinetics

Alaska Energy Authority

www.akenergyauthority.org

Lessons Learned

The role of data collection, analysis, and dissemination

Jason Meyer

Program Manager, Emerging Energy Technology

Alaska Center for Energy and Power

Lessons Learned

“A critical element of funding emerging energy technology projects is the inclusion of a robust data collection and analysis component.”



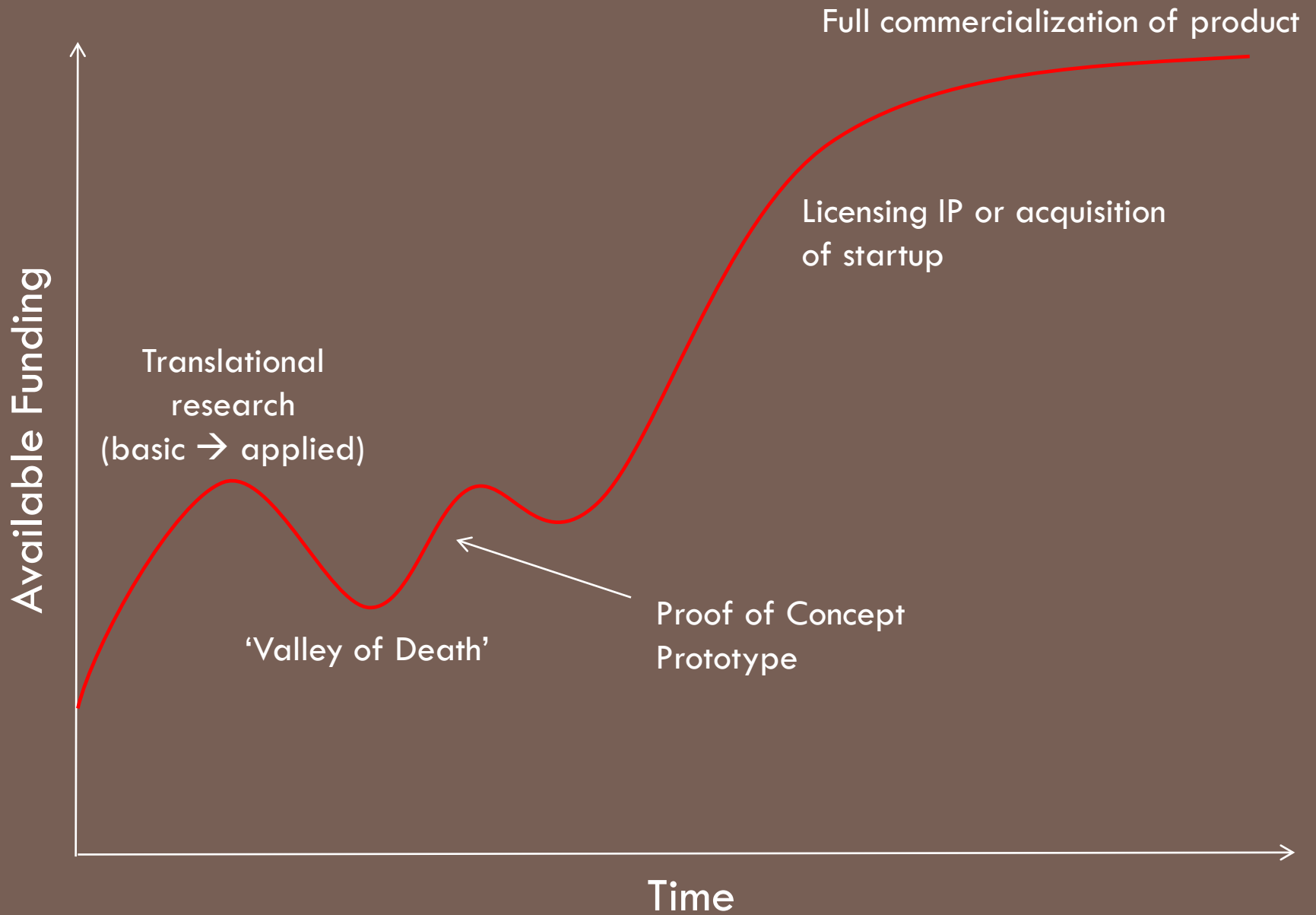
Lessons Learned



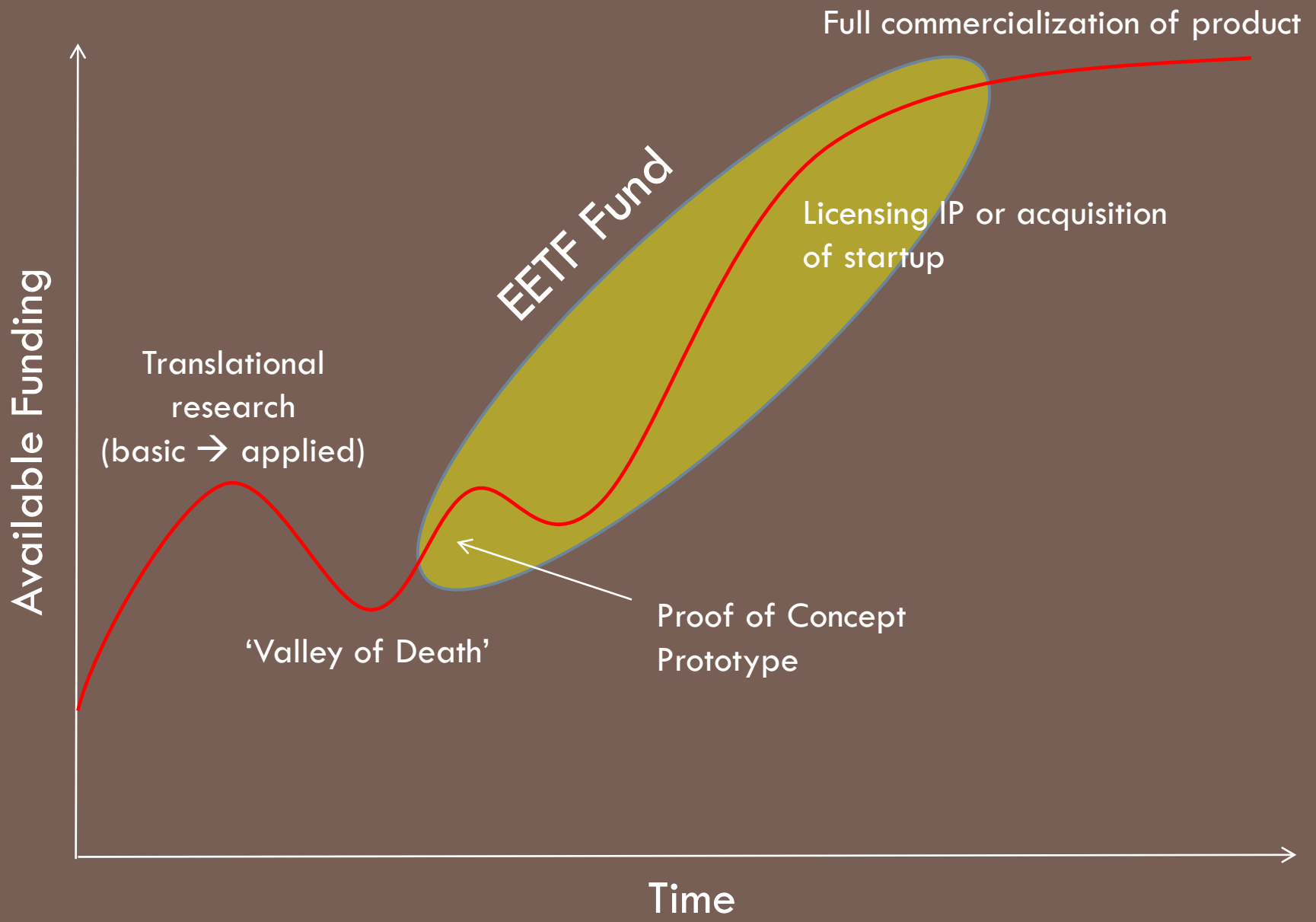
Public

Gov.

Industry



Technology Development Chain



Technology Development Chain

Lessons Learned is the Point!!!!

- Not basic research, not commercialized products
 - ▣ Inherent project risks, challenges, and difficulties
- Paying for “information”, not for “success”
- Technology “learning curve”
 - ▣ Results feedback into technology design and application
 - ▣ Results for technology applications in Alaska

Why Lessons Learned Matter

Industry

- Shared barriers to development, regardless of individual technology
- In-river hydrokinetics industry
 - ▣ Deployment
 - ▣ Debris mitigation
 - ▣ Environmental impacts
 - Fish, sedimentation, etc.
 - ▣ Permitting process

Why Lessons Learned Matter

Government

- Informed funding decisions
- Assist in planning, goal setting, and other strategic efforts
- Provide benchmark for evaluation efforts of other funding mechanisms
 - ▣ Renewable Energy Fund

Why Lessons Learned Matter

Public

- Informed grass-roots development
 - ▣ Matching resource potential with appropriate technology
 - ▣ Alaska Energy Pathway
- Improved project development, proposals, and funding opportunities

Role of ACEP

- Tasked to provide supplemental data collection, analysis, and information dissemination
- Ensure that sufficient data collection is a result of the project
- Evaluation: technical, performance, economic...
 - ▣ MOU with Institute of Social and Economic Research
- Disseminate project information and results

Typical Tasks

- Data collection instrumentation
 - ▣ Purchase, fund, install
- Technical review, feedback, and assistance
 - ▣ Project design review
 - ▣ Assistance with instrumentation, equipment, or data collection efforts included in project SOW
- Support of included or ongoing efforts
 - ▣ Collaboration with project partners

Challenge



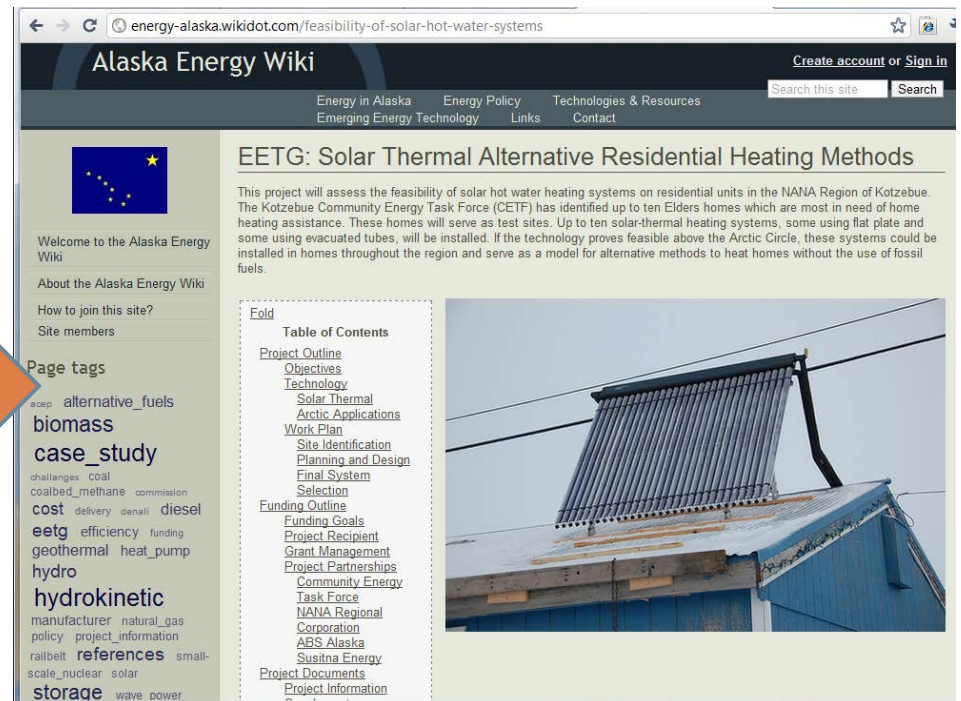
*Lessons Learned by Mike Licht, NotionsCapital.com
via Flickr*

**Make data, analysis,
information, and results
meaningful, accessible,
and relevant**

Information Dissemination

- Final project report will be created by ACEP
- Each project has a page on the 'Energy Wiki' site. Includes reports, projects, data.

Goal is to make information and outcomes accessible to all Alaskans



The screenshot shows a web browser window displaying the Alaska Energy Wiki page for "EETG: Solar Thermal Alternative Residential Heating Methods". The page title is "EETG: Solar Thermal Alternative Residential Heating Methods". The main content area contains a paragraph describing the project's goal to assess the feasibility of solar hot water heating systems on residential units in the NANA Region of Kotzebue. Below the text is a "Table of Contents" section with a "Fold" button, listing various project components such as "Project Outline", "Objectives", "Technology", "Work Plan", "Funding Outline", and "Project Information". To the right of the text is a photograph of a solar thermal collector installed on a blue metal roof. The left sidebar of the wiki page includes a welcome message, "About the Alaska Energy Wiki", "Page tags" (listing terms like biomass, case_study, hydro, etc.), and a search bar.



Welcome to the Alaska Energy Wiki

About the Alaska Energy Wiki

How to join this site?

Site members

Page tags

- [aocp](#) [alternative_fuels](#)
- [biomass](#)
- [case_study](#)
- [challenges](#) [coal](#)
- [coalbed_methane](#) [commission](#)
- [cost](#) [delivery](#) [denali](#) [diesel](#)
- [eetg](#) [efficiency](#) [funding](#)
- [geothermal](#) [heat_pump](#)
- [hydro](#)
- [hydrokinetic](#)
- [manufacturer](#) [natural_gas](#)
- [policy](#) [project_information](#)
- [railbelt](#) [references](#) [small-scale_nuclear](#) [solar](#)
- [storage](#) [wave](#) [power](#)

EETG: Solar Thermal Alternative Residential Heating Methods

This project will assess the feasibility of solar hot water heating systems on residential units in the NANA Region of Kotzebue. The Kotzebue Community Energy Task Force (CETF) has identified up to ten Elders homes which are most in need of home heating assistance. These homes will serve as test sites. Up to ten solar-thermal heating systems, some using flat plate and some using evacuated tubes, will be installed. If the technology proves feasible above the Arctic Circle, these systems could be installed in homes throughout the region and serve as a model for alternative methods to heat homes without the use of fossil fuels.

[Fold](#)

Table of Contents

- [Project Outline](#)
- [Objectives](#)
- [Technology](#)
- [Solar Thermal](#)
- [Arctic Applications](#)
- [Work Plan](#)
- [Site Identification](#)
- [Planning and Design](#)
- [Final System](#)
- [Selection](#)
- [Funding Outline](#)
- [Funding Goals](#)
- [Project Recipient](#)
- [Grant Management](#)
- [Project Partnerships](#)
- [Community Energy](#)
- [Task Force](#)
- [NANA Regional](#)
- [Corporation](#)
- [ABS Alaska](#)
- [Susitna Energy](#)
- [Project Documents](#)
- [Project Information](#)





Questions?

<http://energy-alaska.wikidot.com/eet>

www.uaf.edu/acep