ACRP Report 121: Innovative Revenue Strategies An Airport Guide

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Lois Kramer
Principal Investigator

- CEO of KRAMER aerotek inc.
- Airport Strategic Business Plans
- Revenue Development/Diversification
- Opportunity Assessments
- Tenant Retention
- Airport Activity & Financial Forecasts
- Other ACRP Reports & Syntheses

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Project Objective

Produce a guide that will help airport professionals identify, evaluate, and implement innovative strategies for generating revenues.

Further project guidance….

Characteristics of Innovative Strategies	Sources of New Revenue Generation	Types of Innovation
• In use by airports, but not widely known • Used by other modes or industries	• Airport users • Entrepreneurial use of airport assets • Regional economy that benefits from airport	• New service concepts • New customer interactions • New business products • New net revenues to the airport sponsor • New delivery systems

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Logic Behind the Research

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The New Normal for Airports Embraces (and Requires) Change

- Innovative technology and its adoption is occurring at an accelerating pace
  - Internet of Things, disruptive technologies, mobile apps
- Demand for change is coming from multiple directions, including:
  - management, customers, the airlines
  - other airport tenants, competing airports, & regulatory groups
- A steady stream of unexpected events contribute to an atmosphere of uncertainty
  - Weather events, multi-country epidemics, terrorism
  - Government funding levels & priorities

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The Guide Presumes Airports Operate As a Diversified Business

- Airport is a business that generates revenue by providing to a captured customer base.
  - Airline Services
  - Traveler Services
  - Retail Services
  - Executive and General Aviation
  - Services to Non-Aeronautical
- Airports may need to reduce dependence on aeronautical revenue and Federal grants

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Ways to Improve Revenues

Results in Improvements to Net Revenues for the Airport Sponsor

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Report Organization

- Guide organizes revenue techniques into 5 strategies
  - Customer experience, needs, and wants
  - Airport provided services/shared services, facilities, & equipment
  - Revenue participation in real estate & mineral development
  - Value capture
  - Improvements to existing businesses
- Guide also presents interesting case studies that show how use of these revenue techniques.

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Strategy Discussions

Elements of the Strategy
Tools and Techniques
Evaluation
Key Points
Summary Tables
Additional References

How to Use the Guide

- All of the techniques (there are 96) are organized by strategy and by functional areas of the airport.
- At the beginning there is a list of all techniques discussed and at the back, an index with page numbers.
- Readers may want to read about a single strategy and all its elements, look up a case study, search for a particular technique, browse different ways to improve revenue within a functional area of the airport (such as parking or terminal operations).
- Every airport will have a unique set of solutions.

Revenue Strategies

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Strategy 1 - Customer Focus

Customer Segmentation

- Know the Airport's Customers

Better Market Penetration

- Target Specific Customer Groups
- Build Customer Relationships
- Generate New & Incremental Revenue

Performance Measurement

- Track Customer Satisfaction & Airport Profitability

	Strategy Effectiveness – Priority ★	
		General Aviation
Cost	Commercial Airports	Airports
$$-$$$$	◆◆◆	◆

What do customers want?

- Suits on the Fly
- Experience Seekers
- Sufferers
- Gate Potatoes
- Open-minded Chillers
- Employees

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Case Study – Indianapolis Int'l

Optimizing Concession Programs

As part of the new Midfield Terminal Building, Indianapolis Airport Authority (IAA) took a new approach to its concession program.

- IAA directly recruited a mix of local and national concessionaires
- Manages the program with a few employees.
- Focus on customer experience first, not revenue
- Innovative approach to solicitation
- Individualized concession agreements
- Excellent and sustained results.

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Strategy 2 – Airport Provided Services & Shared Use

Airport Provided Services	• Services provided to airport tenants and passengers by the airport for profit.
Shared Services	• Services shared through common providers to create critical mass and reduce the cost of services for all that participate.
Shared Facilities, Systems, & Equipment	• Sharing and cross-utilization to improve efficiency and reduce user cost

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Strategy 2 – Examples

Airport Provided Services	
	Airport Tenants
	Logistics Services & Warehousing for Concessionaires
	Trash Removal & Recycling
	Ground Handling
	Above and Below the Wing
	Glycol Recovery and Recycling
Shared Services	
	Janitorial
	Joint Marketing & Advertising
Shared Facilities, Systems, & Equipment	
	Communications Systems & Cell Phone Towers
	Consolidated Air Cargo Facility
	Shared Gates

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Evaluated Potential for:

- Revenue Improvement
- Cost Recovery
- Operational Efficiency

Case Study – Springfield-Branson Ground Handling Services

SGF owned and operated the FBO and fuel farm. Expanded to ground services when they could not secure a ground handling contractor

- Airport purchased second hand equipment and cross-utilized airport staff
- Activity Results
  - More passengers
  - Air service retained
  - Charter activity
- Financial Results
  - Ground handling revenues
  - Increased landing fees
  - Into-plane charges
  - De-icing sales
  - Increased PFCs and CFCs, parking revenues, rental car, and concession revenues

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Strategy 3 – Revenue Participation

Real Estate & Natural Resource Development

- Direct Ownership
- Participating Leases and Equity Participation
- Public Private Partnerships
- Joint Development
- Mineral Estate Participating Leases

Extent of Airport Use	Revenue Potential	Airport Assumption of Risk	Capital Required	Complexity to Implement	Political & Institutional Challenges
◆-◆◆	◆◆◆	◆◆	◆◆	◆◆◆	◆◆◆

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Case Study - Pittsburgh Int'l

TIF Financing & Participatory Lease

The Allegheny County Airport Authority (ACAA) faced a stagnant real estate market. By utilizing creating financing, ACAA was able to jumpstart development activity

- ACAA entered into the risk sharing agreement with a developer to construct a building on spec.
- ACAA used Tax Increment Financing (TIF) to cover gaps in funding for needed infrastructure.
- The Authority offered low initial ground rent. Once the property was built and occupied, ACAA shared in the building rent.

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Case Study - McCarran Int'l

Participatory Leasing Program

Clark County officials acquired 5,226 acres of land transferred from the BLM, much of which was located in the airport's noise abatement zone.

- The Department of Aviation identified opportunities to develop certain parcels of land for commercial purposes.
- Local ordinances allowed the Department to participate in real estate development in a manner similar to a joint venture.
- Several successful participatory leases were negotiated.

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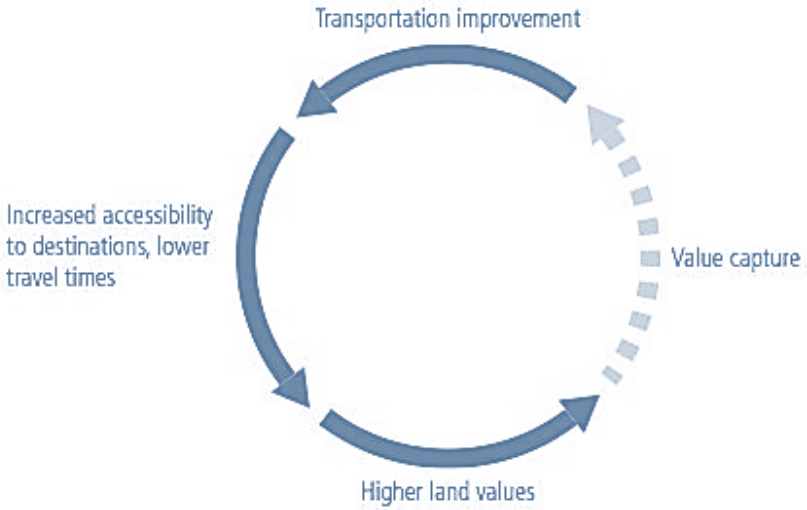
Strategy 4 – Value Capture

Off-Airport Beneficiaries

- Hotels and restaurants
- Rental cars
- Parking lots
- Travel plazas and gas stations
- Office buildings
- Wholesale trade
- Just-in-time manufacturing
- Trucking and logistics



Value Capture Mechanisms

- Access and privilege fees
- Fixed assessments
- Taxes or special allocations of tax receipts
- Business improvement districts
- Airport cities and foreign trade zones

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Case Study - Boston Convention and Exhibition Center

Use of value capture techniques to help finance a large project

- Multiple sources of funding
  - Hotel room occupancy tax
  - Sales tax
  - Meal tax
  - Car rental fees
  - Parking taxes/fees
  - Land & water-based tour fee
- Special legislation required
- High level of cooperation from stakeholders who recognized a common purpose and benefits of the project.

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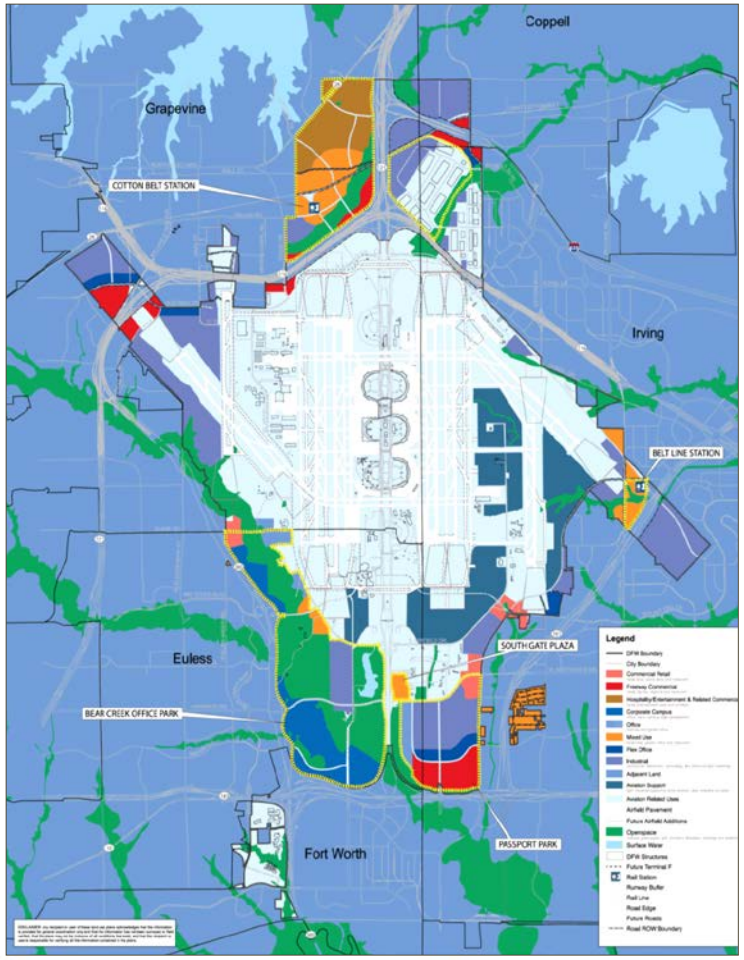
Case Study - DFW Foreign Trade Zone



- Airport spans 18,000 acres and 5 municipalities.
- FTZ illustrates how DFW creates additional value for development in the vicinity of the airport.
- Example of how and airport sponsor and municipalities can implement multi-party agreements to share tax revenues.

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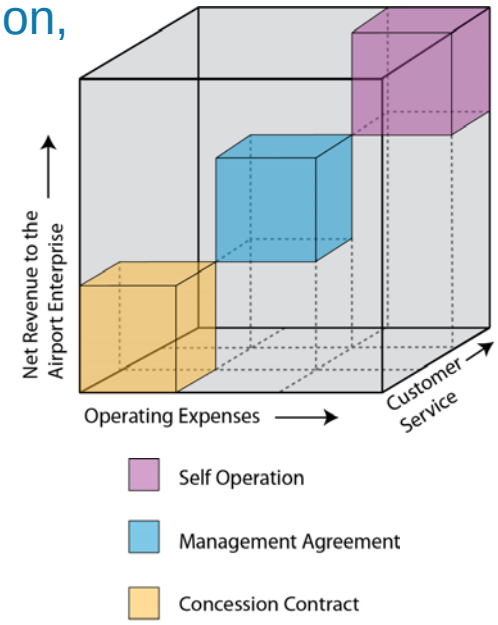
Strategy 5 – Improvements to Existing Airport Businesses

Elements of the Strategy

- Management alternatives
- Program planning, document preparation, solicitation & award
- Performance improvements
- Use of information technology
- Monitoring performance



Application of the Strategy to:

- Parking
- Rental Cars
- In-Terminal Concessions

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Wrap Up

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Concluding Thoughts

- Airports oversee a complex set of enterprises.
- Except at their largest connecting hubs, airlines are depending more on airport sponsors and third party contractors to provide ground support, passenger, processing, and baggage handling.
- Traditional sources of funding remain but levels are often insufficient or timing is uncertain.
- Revenue strategies offer additional/incremental $$ to pay for maintenance, day-to-day operations, and capital projects.

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The Intention of Report 121 is to Inspire Innovation

- New net revenues can come from:
  - Cost savings
  - Improvements to existing airport businesses
  - Airport engagement in new services and activity.
- Revenue strategies can be effective in every functional area of an airport.
- Strategy effectiveness requires airports to recognize and respond nimbly to opportunities.
- Implementation is likely to be a continuous process of incremental improvements.
- Every airport will have a unique set of solutions.

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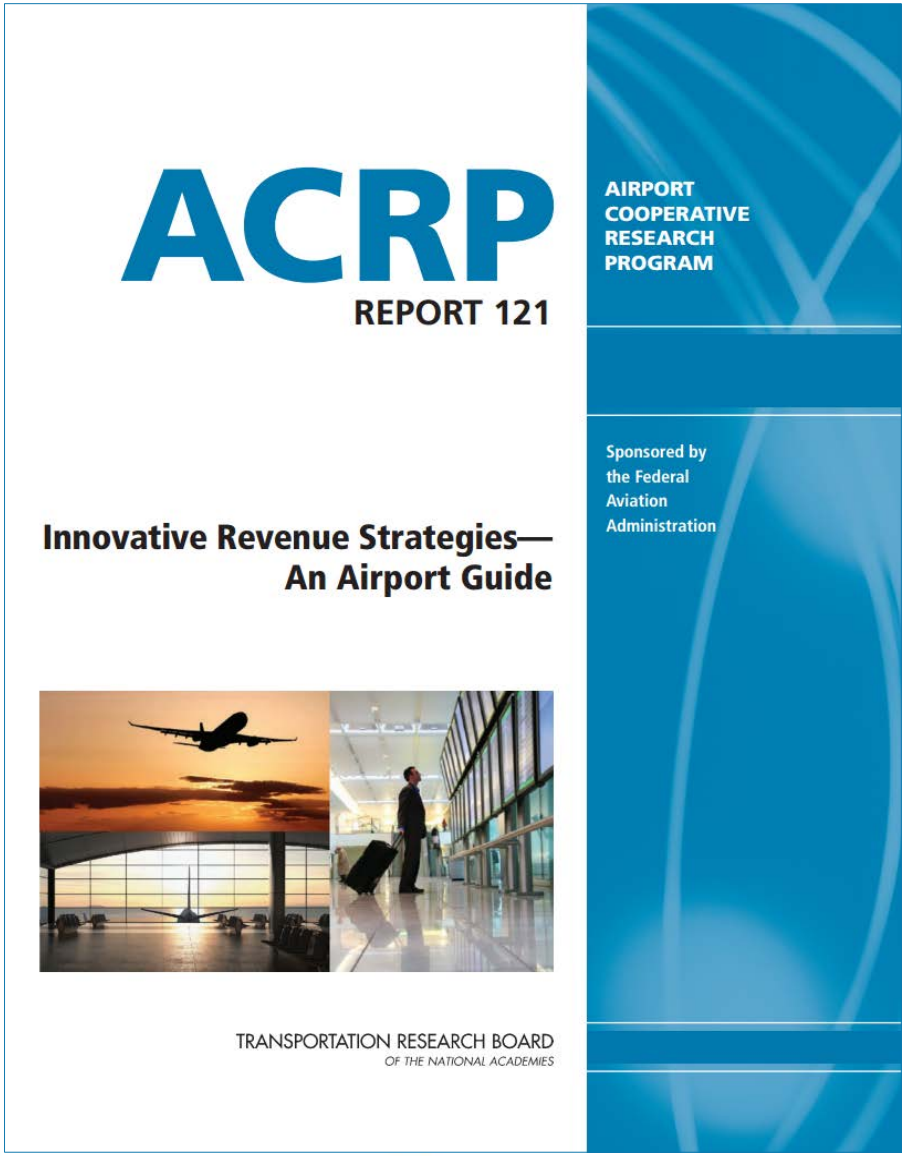

Questions

Comments

Discussion

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ACRP Report 141: Renewable Energy as an Airport Revenue Source

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- Principal Investigator for ACRP Report 151, *Developing a Business Case for Renewable Energy at Airports* (Pre-Publication Release, October 2015)
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ACRP Report 141: *Renewable Energy as an Airport Revenue Source*

- Introduces renewable energy technologies to the aviation reader
- Summarizes opportunities for and obstacles to deploying renewable energy projects at airports
- Describes the typical renewable energy ownerships scenarios and applicable financing options
- Reviews the airport decision-making process for evaluating and pursuing renewable energy
- Identifies key stakeholders and their roles
- Provides financial modeling tools to assess project cost-effectiveness
- Includes 21 Case Summaries of Airport Renewable Projects

- Published August 2015

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Research Problem

Airports operate in a competitive environment; they need to be constantly looking for creative ways to increase revenues and decrease costs.

Advances in renewable energy technology present opportunities to generate revenue and achieve cost savings.

There are many airport renewable energy projects that demonstrate this opportunity, but the functional and financial information behind their success has not been documented for the industry.

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Research Approach

Develop general information on technical and financial aspects of renewable energy.

Integrate that information into a familiar airport decision-making process.

Research and summarize experience of specific airport renewable energy projects to demonstrate practice.

Provide practical reference materials for airports to use for evaluating and implementing their own projects.

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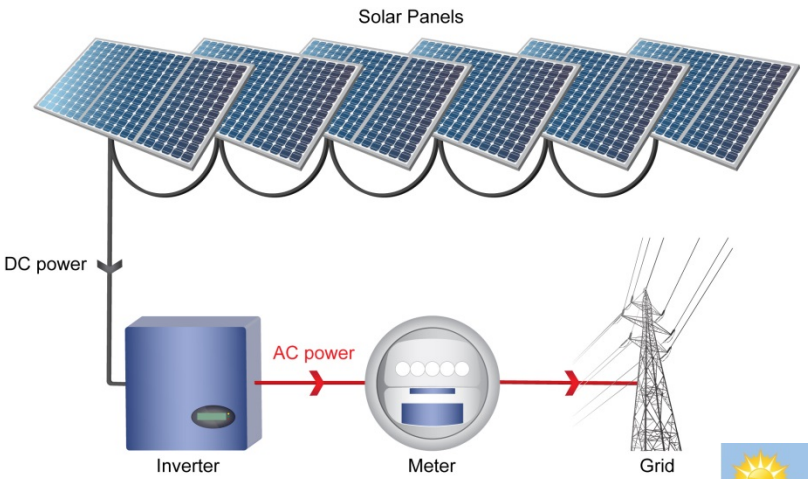
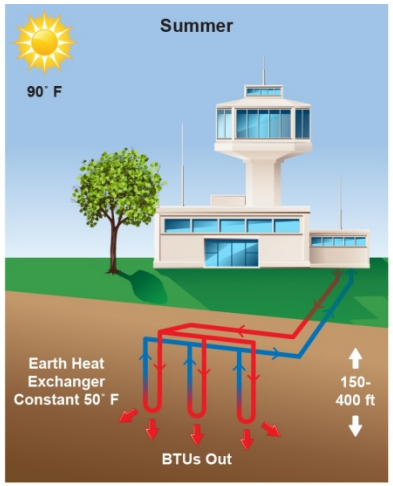
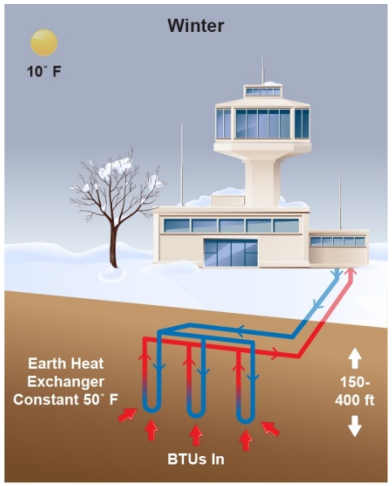
Results – Technologies







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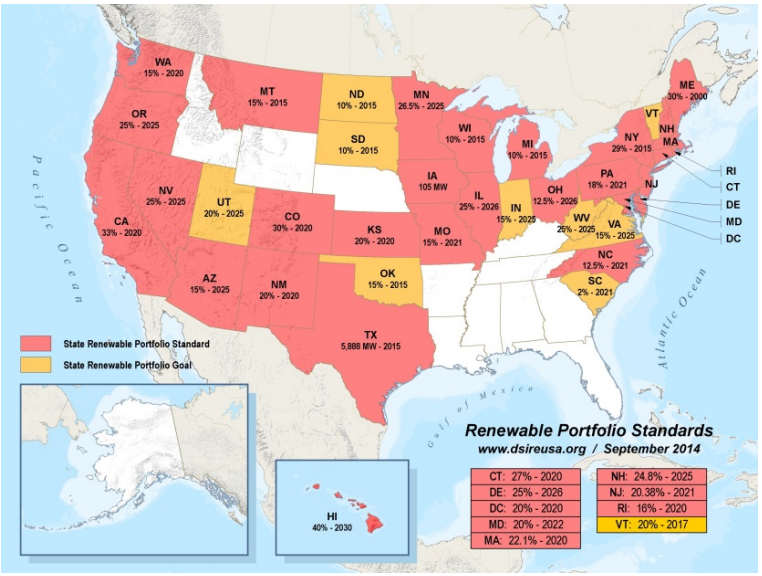
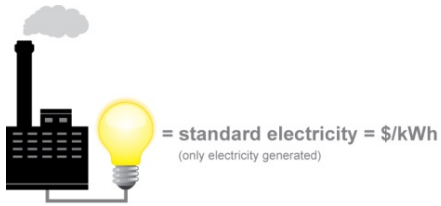
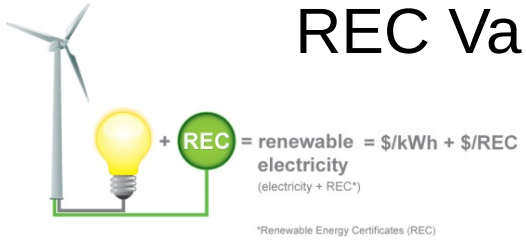
Results – Economic Value

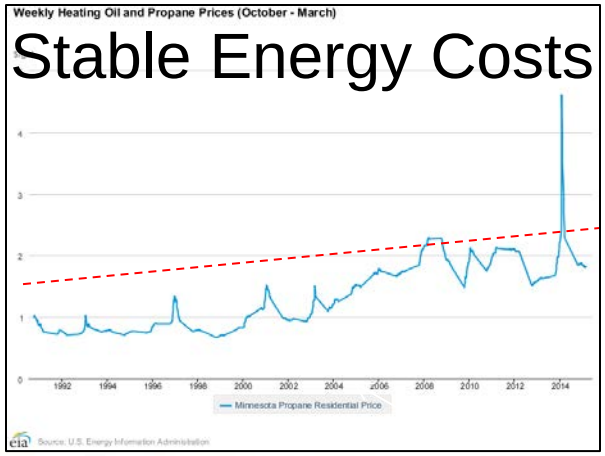
State Incentives





REC Value





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Results – Business Structure

Airport Owned

Grants
Bonds

$ $

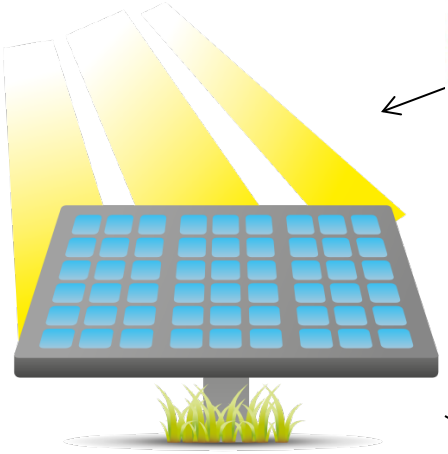
Third Party Owned

Private capital
Tax equity

Land, Building

$ $

Government Cannot Monetize Tax Credits, Must Fund with Grants



Tax Credits available to private parties, Savings passed to Airport and Electricity Buyer

$ $

Energy savings

$ $

Return on Investment
from PPA

Discounted energy
or annual lease payment

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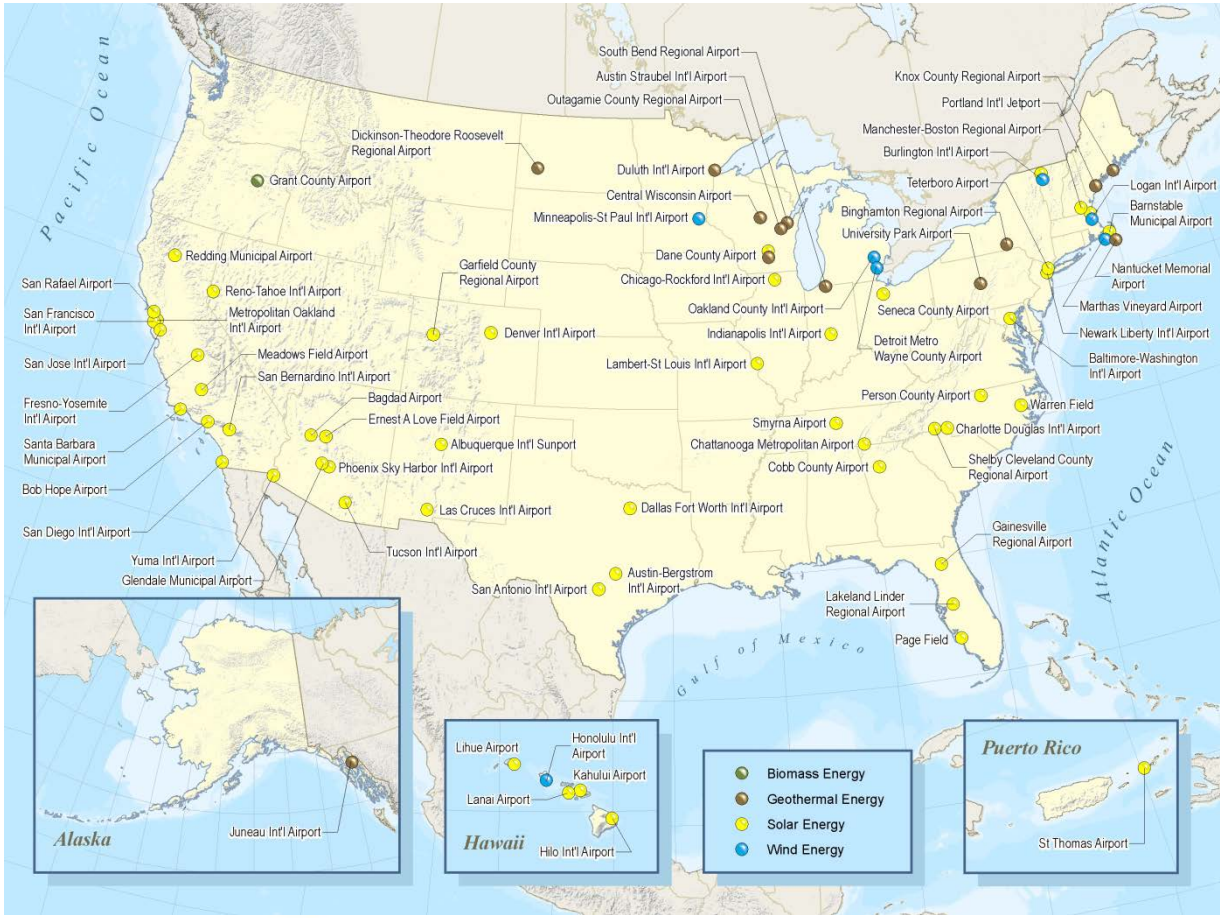
Results – Projects at Airports



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Results – Case Summaries

	Airport	State/Country	Renewable Energy Technology	Ownership
1	Barnstable (HYA)	MA	Solar PV	Third Party
2	Boston – Logan (BOS)	MA	Solar PV	Third Party
3	Boston – Logan (BOS)	MA	Wind	Airport
4	Brainerd Lakes (BRD)	MN	Solar Thermal	Airport
5	Burlington (BTV)	VT	Wind	Tenant
6	Chicago-Rockford (RFD)	IL	Solar PV	Third Party
7	Denver (DEN)	CO	Solar PV	Third Party
8	East Midlands (EMA)	United Kingdom	Wind	Airport
9	Grant County (JDA)	OR	Biomass	Airport
10	Indianapolis (IND)	IN	Solar PV	Third Party
11	Juneau (JNU)	AK	Geothermal	Airport
12	Lakeland (LAL)	FL	Solar PV	Third Party
13	Nantucket (ACK)	MA	Geothermal	Airport
14	Outagamie (ATW)	WI	Solar PV, Thermal, Geothermal	Airport
15	Portland (PWM)	ME	Geothermal	Airport
16	Redding (RDD)	CA	Solar PV	Airport
17	San Diego (SAN)	CA	Solar PV	Tenant
18	San Diego (SAN)	CA	Solar PV	Third Party
19	Toronto – Pearson (YYZ)	Canada	Solar Thermal	Airport
20	Tucson (TUS)	AZ	Solar PV	Airport
21	University Park (UNV)	PA	Geothermal	Airport

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Action – State Project Goal

Lower existing energy costs

Diversify revenues

Diversify energy supply

Enhance energy reliability

Promote sustainability policy

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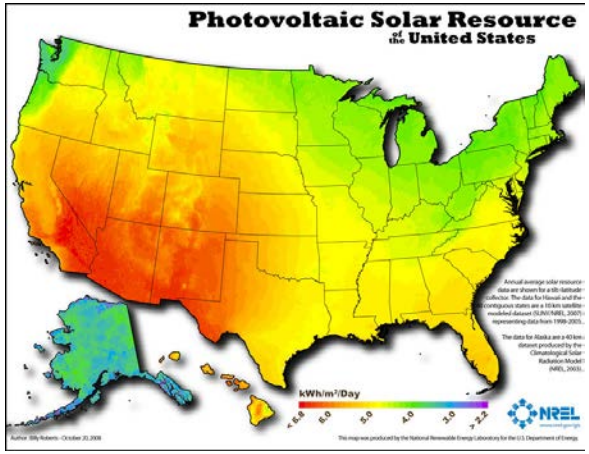
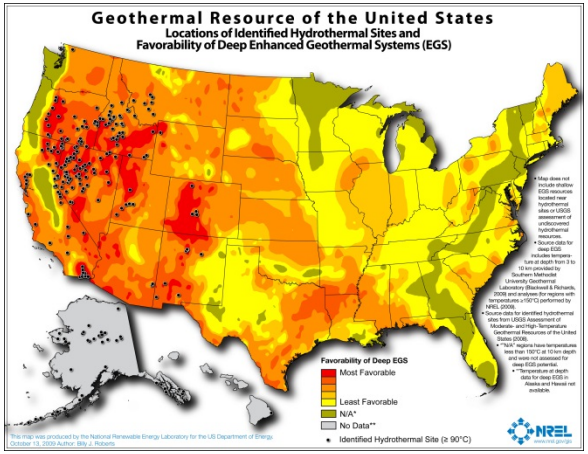
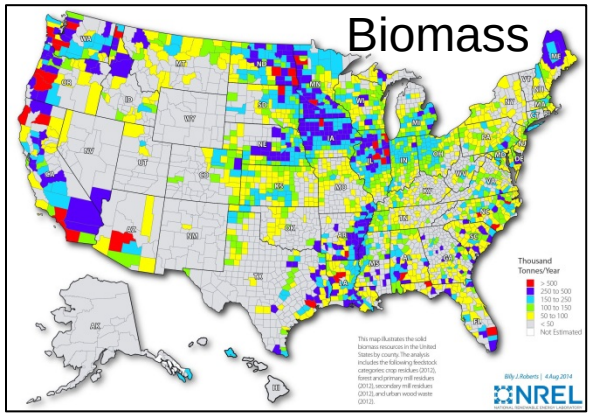
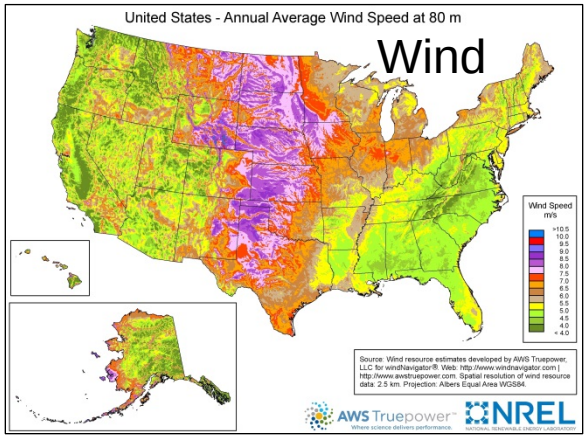
Action – Identify Appropriate Renewable Resource









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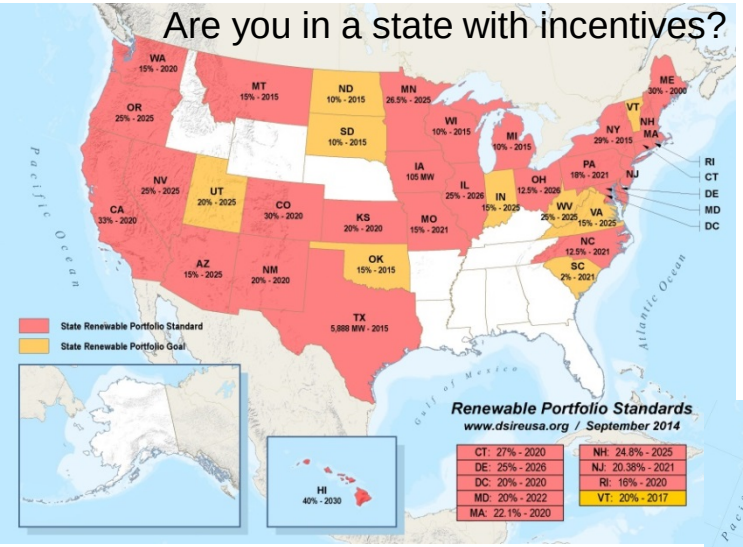
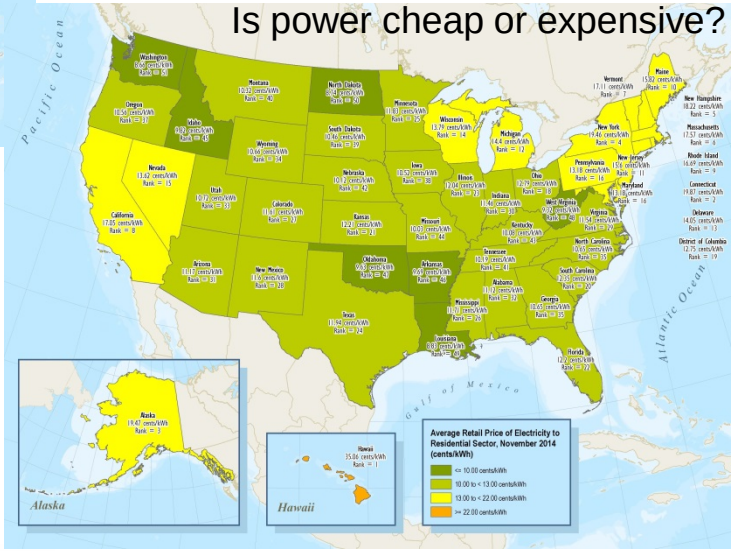
Action – Determine Most Cost-Effective Business Model





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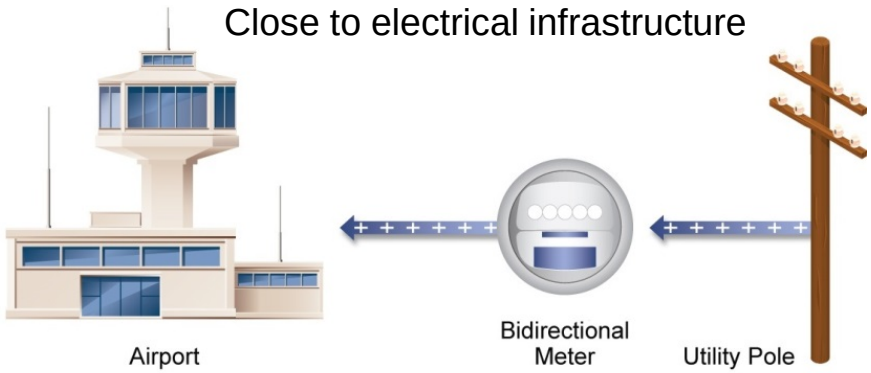
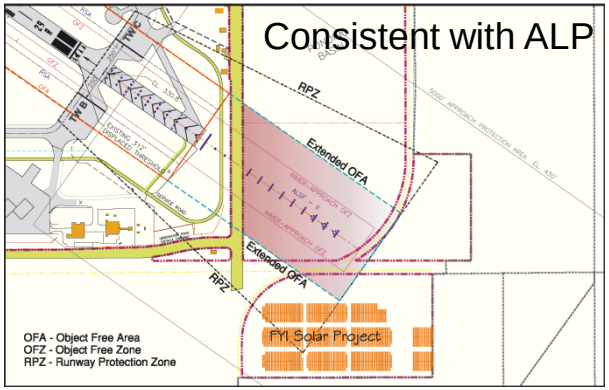
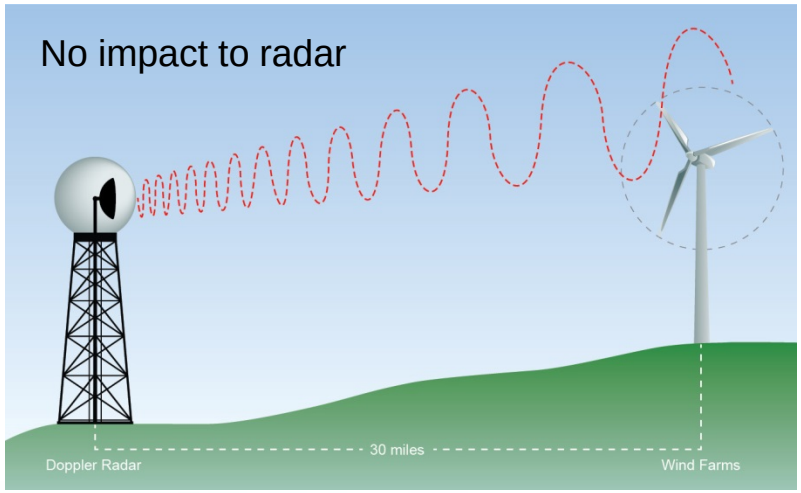
Action – Locate Appropriate Site







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Action – Prepare Cost Benefit

Estimate installed cost of project

Estimate annual operations and maintenance for life of the project

Airport owned project

- Build in financing costs
- Identify funds to construct
- Estimate annual savings to determine break even

Third party project

- Decrease project costs by value of available tax credit
- Incorporate investor rate of return to project cost
- Determine price of electricity that is economical

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Action – Implementation

Coordinate with internal and external stakeholders

Apply for grants

Issue RFP for renewable energy

Permits and Approvals

Interconnection Process with Utility

Project Management

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Example 1 – San Diego

Solar PV on Terminal and over parking

Owned by Third Party

Airport buys all electricity

20 year contract

Price level for term

Part of GreenBuild Terminal

Energy generation for microgrid

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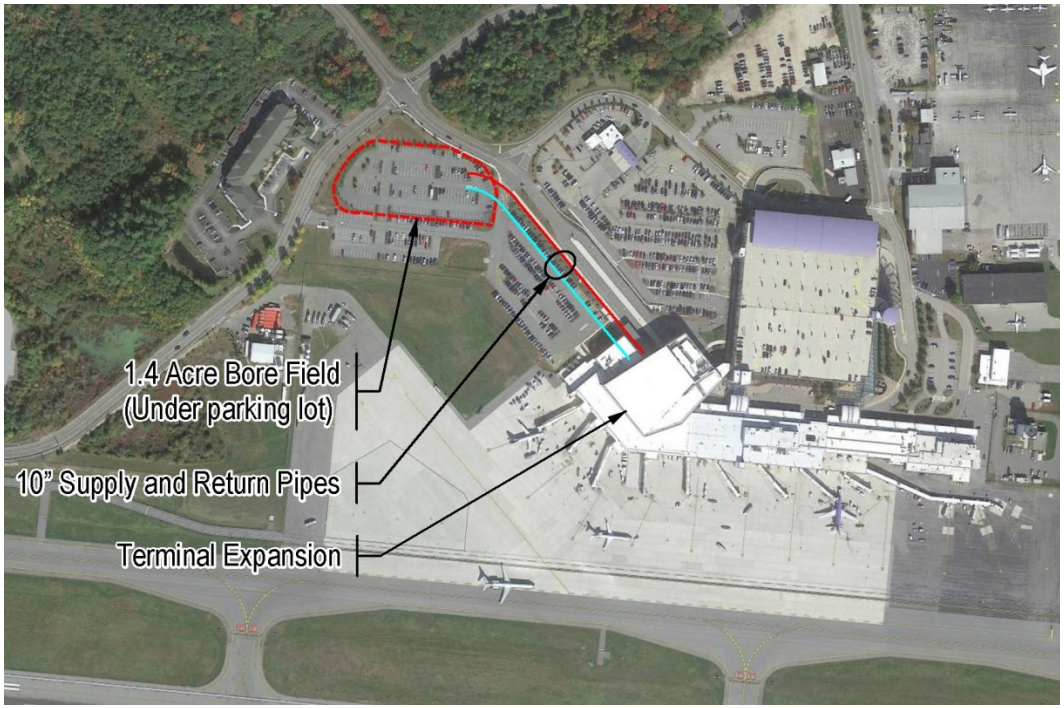
Example 2 – Portland (ME)



Ground source heat pump

Part of Terminal Expansion Project

Owned by the Airport

Vale grants paid for 81% of project cost

Annual net cost savings of $160,000

Airport's share payback in 3.6 years

Monitoring system

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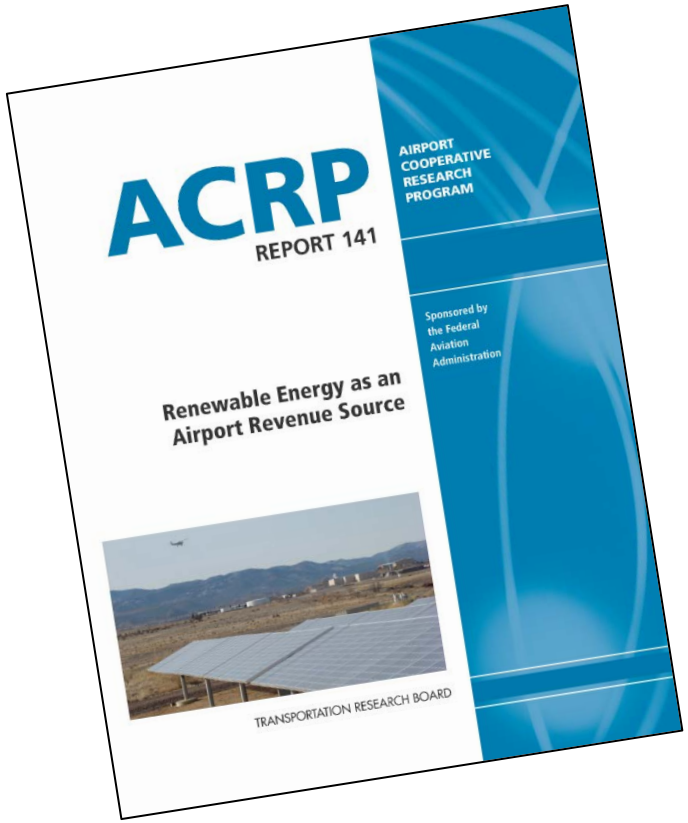
For additional information:



ACRP Report 141*: Renewable Energy as an Airport Revenue Source*

http://www.trb.org/Main/Blurbs/172634.aspx

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