

The background of the slide is a digital artwork depicting a futuristic space environment. It features a large, blue, curved horizon line, possibly representing a planet or a large celestial body. In the foreground and midground, there are several complex, wireframe-like structures that resemble space stations or industrial facilities. These structures are composed of thin, glowing lines and some small, bright points of light. The overall color palette is dominated by blues and greys, with some highlights from the wireframe structures. The text is overlaid on this background in a clean, white, sans-serif font.

# **Economic Incentives and Tax Credits for Space Resource Development: Analogies and Ideas**

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NASA Ames Research Center

Image credit Mafic Studios

# **Importance of Economic Incentives**

- **Nurture and support nascent industries**
- **Develop leadership in innovative areas**
- **Motivate decisions or actions by others**
- **Goal/outcome oriented**



# Types of Economic Incentives

## Government

- Grants
- Subsidies
- Low interest loans
- Loan guarantees
- Carbon credits/ offsets
- Other incentives
- Tax holidays
- Reduced tax rates
- Performance-Based Tax Credits
- Transferrable tax credits
- Prizes
- Pre-Purchase Agreements
- Preferential procurement policies
- Guaranteed annual revenues, etc
- Depletion allowances vs Depreciation

## Non-government

- Prizes
- Patronage

## Property Rights and Licenses



# **KEY ISSUES – Economic Incentives or Access?**

**Inexpensive, reliable ACCESS to  
Space IS the Deal Breaker.**

**Key Long-term Motivators**

- **Survival of the Species**
- **Resource Scarcity**
  - **Energy**
  - **Minerals**



# The Space Industry and Incentives

- NASA Changing IPP
  - SBIRS
  - Centennial Challenges
  - COTS
- Oklahoma and Rocketplane
- Senator Nelson 2010 proposals



# SBSP and useful analogies

- **Production/Investment credits focused on green energy generation**
- **Carbon Credits/Offsets/RECs**
- **Rebate programs**
- **RPS requirements (Renewal Production Standards)**
- **Loan Guarantees**

# Best analogy for space resource development = Canadian Oil and Gas Exploration

- Flow-through shares
- CEE = Canadian Exploration Expense
- ITCE = Investment Tax Credit for Exploration
- Packaged for smaller investors
- Achieve multiple policy goals
- Mineral property right structure



**THANK YOU!**

Questions?

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