

Space Solar Power Concept Technology
Maturation
Technical Interchange Meeting
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Output from Working Group Session:
“Environmental & Other”

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•Group Members:

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- Jerry Grey
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- Jay Skiles, Moderator

•Assumptions:

- We are dealing with the SSP Demonstration Project
- Time Horizons
 - 5 yrs
 - 10 yrs
- Demo Project is Component of Full-Scale SSP

•Areas Addressed:

- Environment
- Economics
- Legal

5 Year Horizon

- Environment - Terrestrial:
 - landuse
 - receiving station siting
 - materials mining
 - biota response to microwave radiation, laser radiation
 - public perception of SSP
 - benefits of SSP
 - alternatives to SSP
 - synergy of SSP technology w/ other technologies
- Environment - On Orbit:
 - orbital environment for platforms & robots
 - atomic oxygen
 - debris; final disposal of components
 - radiation
- Economics:
 - buy-in by other entities to provide partial funding
 - DOD, aerospace industry, communications industry
 - beam power from geo SSP satellite(s) to satellite(s) in leo

5 Year Horizon (cont.)

- Economics:

- buy-in by other entities to provide partial funding
 - DOD, aerospace industry, communications industry
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- Legal:

- intellectual property retained privately
 - alter regulatory regimes to allow investment in SSP
 - promote international cost-sharing
 - target tax credits for SSP investment
 - patent laws modified for longer timeframe
 - SEC (et seq.) rules modified for space investment

- Public Issues:

- Environmental Impact Assessment required
 - involve public
 - endangered species
 - tree huggers

5 Year Horizon (cont.)

- Personnel Issues
 - physical exams
 - training
 - area control
 - monitoring

10 Year Horizon

- Environment:
 - landuse
 - testing of organismal response to energy delivery system
- Economics:
 - studies to compare technologies
 - preparation of workforce
- Legal:
 - exempt SSP from weapons control regimes
 - institute multi-national treaties that address SSP sharing
 - establish regulation agency/framework to administer -
 - rights to energy
 - responsibilities