

## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - General - NOC:Non-Conventional Energy Resources

Subject Co-ordinator - Dr. Prathap Haridoss

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Renewable Energy Technologies  
Lecture 2 - Energy Usage by Humans - Estimate of Impact on Atmosphere  
Lecture 3 - Conventional Sources of Energy  
Lecture 4 - Non-Conventional Sources of Energy - An Overview  
Lecture 5 - Energy consumption  
Lecture 6 - Details of Energy usage in each sector  
Lecture 7 - Consequences of Energy consumption  
Lecture 8 - Solar Energy incident on Earth, Solar Spectrum  
Lecture 9 - The Solar Energy Budget  
Lecture 10 - Electromagnetic Radiation - The Solar Spectrum  
Lecture 11 - Solar flat plate collector  
Lecture 12 - Solar Radiator  
Lecture 13 - Solar Energy - The Semiconductor  
Lecture 14 - Solar energy - The p-n junction  
Lecture 15 - Solar Cell - Growing the single crystal and making the p-n junction  
Lecture 16 - Solar Energy - Interaction of p-n junction with radiation  
Lecture 17 - Solar Energy - Solar cell characteristics and usage  
Lecture 18 - Solar Energy - Solar cell construction  
Lecture 19 - Solar Energy - Solar Photocatalysis  
Lecture 20 - Wind Energy - Overview  
Lecture 21 - Wind Energy - Energy Considerations  
Lecture 22 - Wind Energy - Efficiency  
Lecture 23 - Wind Energy - Parts and Materials  
Lecture 24 - Wind Energy - Design Considerations  
Lecture 25 - Ocean Thermal Energy - Conversion (OTEC)  
Lecture 26 - Geothermal Energy  
Lecture 27 - Geothermal Energy Technological aspects  
Lecture 28 - Biomass Usage and Issues  
Lecture 29 - Battery Basics

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- Lecture 30 - Battery Testing and Performance
- Lecture 31 - Lithium ion Batteries
- Lecture 32 - Common Battery Structures and Types
- Lecture 33 - Types of Fuel Cells
- Lecture 34 - Fuel Processing for PEM Fuel Cells
- Lecture 35 - Fuel Cells
- Lecture 36 - Characterization of Electrochemical Devices
- Lecture 37 - Fuel Cells
- Lecture 38 - Supercapacitors
- Lecture 39 - Flywheels
- Lecture 40 - Magnetohydrodynamic Power Generation