

# MAE 118B Summary

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- Growth In Energy Demand
- Current Set of Primary Energy Sources
- Climate Change Physics
- Estimates of C-free Energy Needs
- Energy Return on Energy Invested
- Overview of C-free Primary & Secondary Sources
- Solar PV
- Wind
- Biofuels
- Hydrogen as Energy Carrier
- Curve of Binding Energy & Nuclear Power
- C-Balance and Requirements for C-free Power in Next Decades

# Epilogue

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- In My **Opinion** (Prof. T)
  - The Nexus of Global Development, Energy Demand, and Climate Change is one of the Principal Challenges of this Century
  - If We Make the Navigate This Transition Successfully, We Create The Conditions for a Healthy and Morally Acceptable Quality of Life for Human Beings
  - Doing So Requires Major Changes in
    - Social Decision Making
    - Resource Allocation and Use
    - And...
  - **Significant Advances in Science and Technology**
- **It is Your Generation's Challenge to Take Up**