



# **SNS COLLEGE OF TECHNOLOGY**

(An Autonomous Institution)



**COIMBATORE-35**

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## **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**COURSE NAME: 19EEO302 – INTRODUCTION OF HYBRID AND  
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# Solar Wireless Charging System For Electric Vehicles

Discover the future of electric vehicle charging with our innovative solar wireless charging system. Say goodbye to cords and hello to sustainable energy!







# Importance of Electric Vehicles

## Reduced Emissions

Electric vehicles contribute to lower air pollution, helping combat climate change and improve air quality in cities.

## Energy Efficiency

Electric motors are more energy-efficient compared to internal combustion engines, reducing our dependence on fossil fuels.

## Noise Reduction

Electric vehicles produce significantly less noise, leading to quieter streets and a more peaceful urban environment.



# Overview of Solar Wireless Charging System

- Efficiently charges electric vehicles using solar power without the need for cords or cables.
- Wireless charging pads transfer energy from the solar panels to the vehicle's battery wirelessly.
- It offers numerous advantages over traditional plug-in charging methods.



# Advantages over Traditional Charging Methods

## 1 Eco-friendly & Sustainable 🌱

Utilizes clean and renewable solar energy, reducing carbon emissions and promoting a greener future.

## 2 Convenience & Flexibility ⚡📦

No more dealing with tangled cords or searching for charging stations. Charge your vehicle effortlessly wherever there is sunlight.

## 3 Cost Savings 💰

Eliminates the need for expensive infrastructure installations and reduces electricity costs compared to traditional charging methods.



# Components of the System

## Solar Panels

High-efficiency solar panels capture sunlight and convert it into electrical energy.

## Wireless Charging Pads

Wireless charging pads use electromagnetic induction to transfer energy wirelessly to the electric vehicle's battery.

## Energy Storage

An energy storage system ensures a steady supply of power even when sunlight is not available.





# Benefits of Solar Wireless Charging for Electric Vehicles

## Eco-friendly and Sustainable

Reduce your carbon footprint and contribute to a cleaner and more sustainable future.

## Convenience and Flexibility

Charge your electric vehicle effortlessly wherever there is sunlight, providing ultimate convenience for everyday use.

## Cost Savings

Save on electricity costs and eliminate the need for expensive charging infrastructure.



# Implementation and Challenges



1

## Integration with Existing Infrastructure

Adapting solar wireless charging systems to existing infrastructure requires careful planning and coordination.

2

## Technical Limitations

Overcoming technical challenges such as efficiency and maintaining consistent power transfer is crucial for widespread adoption.

3

## Regulatory and Policy Considerations

Policies and regulations need to be supportive and incentivize the integration of solar wireless charging systems into public and private spaces.





# Conclusion

## 1 Future Prospects

The solar wireless charging system holds great potential to revolutionize the electric vehicle charging landscape, providing a sustainable and convenient solution.

## 2 Call to Action

Join the clean energy movement and adopt solar wireless charging systems to drive towards a greener and more sustainable future.