

## FACTORS INFLUENCING INTENTION TO PURCHASE RESIDENTIAL SOLAR PANEL SYSTEMS IN SRI LANKA

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**Abstract:** This research explores the determinants of residential solar panel adoption intentions in Sri Lanka's urban settings, focusing specifically on Colombo. Employing a quantitative research design, the study evaluates how product knowledge, perceived benefits, cost considerations, and social influence shape purchasing decisions. Data were gathered from 291 participants using a structured survey and analyzed via correlation and regression methods. The analysis highlights that perceived costs and social influence play significant roles in shaping purchase intentions, whereas product knowledge and perceived benefits do not exhibit substantial impacts. The findings explain a significant portion of the variability in purchase intentions, underlining the importance of cost-related perceptions and the role of social influence as critical factors. These insights are crucial for developing effective marketing strategies in the renewable energy sector, offering guidance for addressing cost concerns and utilizing social dynamics to promote solar energy adoption. The study advances the understanding of consumer behavior in sustainable energy solutions within urban Sri Lanka, providing actionable recommendations for solar energy providers, policymakers, and researchers.

**Keywords:** Solar Panel Systems, Purchase Intention