



PROJECT SUMMARY

Ref No.: MRIC/CRIGS-25-BG/P02	Title: A Smart Energy Wallet for Solar Energy Monetization and Grid Transformation
Local Institution: Telcom Solutions Ltd	
Collaborating Institution: University of Mauritius	
Project Leader	
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TECHNICAL ABSTRACT	
<p>Mauritius is facing increasing stress on its national electricity grid, with growing demand now resulting in grid instability. In response, the Central Electricity Board is urgently promoting solar PV adoption, including free installations for NHDC homes and religious institutions. Yet adoption remains far below target due to multiple barriers: high PV installation costs, long return-on-investment periods, a fixed Rs 4.20/kWh feed-in tariff over 20 years, and the inability to monetize energy surplus instantly. VoltPay solves this gap by introducing a Smart Energy Wallet that converts solar surplus into digital VPUs (VoltPay Units), which users can spend instantly within a national merchant and utility ecosystem. VPUs become a usable economic asset rather than an invisible return. The system integrates BillingMecha (real-time recipient eligibility logic), VPU Color Logic (value classification and audit-proof flow), and the Bulletproof System (ensuring payout sustainability without financial imbalance). This Phase II Concept Refinement project will build, test, and pilot the VoltPay platform, finalize policy alignment, and engage key national stakeholders including CEB and UoM. Results will include a scalable, regulation-compliant digital energy marketplace for Mauritius with expansion potential across Africa. Intellectual property may arise from the credit lifecycle tracking architecture, secure VPU value transformation mechanisms, and autonomous payout control systems.</p>	
<p>Key Words: Smart Energy Wallet , Solar Monetization , VPUs (VoltPay Units) 11, BillingMecha, Digital Energy Trade, Grid Resilience , Closed-Loop Payment System, Sustainable Energy Innovation</p>	