

## **Penerapan *Advance Metering Infrastructure* (AMI) di PT PLN (Persero) Dalam Transformasi Sektor Energi Indonesia: Tantangan dan Prospek Masa Depan**

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### **ABSTRACT**

*Smart Grid has developed into a current topic of discussion and research in various parts of the world, as well as using smart meter systems. The electric power industry is in the process of integrating with bidirectional systems and power flow infrastructure commonly claimed as smart grid. In general terms, smart grid means integration of technology issues and power grids. Advance metering infrastructure (AMI) is a crucial component of smart grid origin where data and frequency are transferred from consumer smart meters to smart grid and vice versa. In this paper, the smart meter scheme design, hardware requirements and applications, as well as the technology are discussed. This paper also focuses on the development of communication protocols and related security using smart meters. Discourse related to financial and other technological issues related to using smart meters will be presented in this paper and some solutions have been suggested.*

**Keyword:** *Smart Grid, Smart Meter, Advanced Metering Infrastructure*

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*Smart Grid telah berkembang menjadi topik diskusi dan penelitian terkini di berbagai belahan dunia, begitu juga menggunakan sistem smart meter. Industri tenaga listrik sedang dalam proses integrasi dengan sistem dua arah serta infrastruktur aliran daya yang biasa diklaim smart grid. Dalam istilah umum, Smart grid artinya integrasi Teknologi isu serta Jaringan Listrik. Advance metering infrastructure (AMI) merupakan komponen krusial asal smart grid dimana data serta frekuensi ditransfer dari smart meter konsumen ke smart grid serta sebaliknya. Pada jurnal ini, desain skema smart meter, persyaratan perangkat keras serta aplikasi, serta teknologinya akan dibahas. Jurnal ini juga berfokus di pengembangan protokol komunikasi dan keamanan yg terkait menggunakan smart meter. Wacana terkait perkara keuangan dan persoalan teknologi lainnya yg terkait menggunakan smart meter akan disajikan dalam jurnal ini serta beberapa solusi telah disarankan.*

**Kata Kunci:** *Smart Grid, Smart Meter, Advanced Metering Infrastructure*