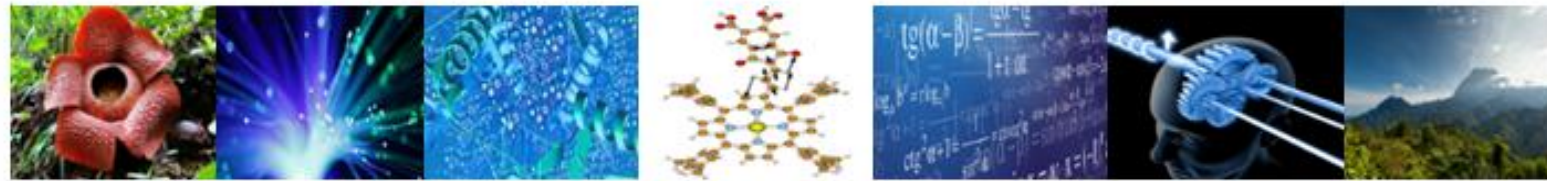


TRANSACTIONS ON SCIENCE AND TECHNOLOGY



Volume 12 Issue No 3
September 2025

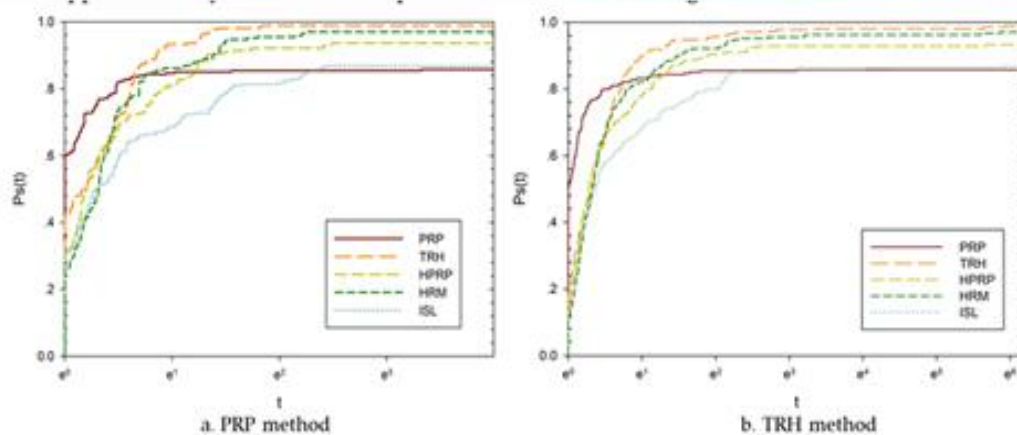


Figure 1. Performance Profile for the Number of Iterations and CPU times.

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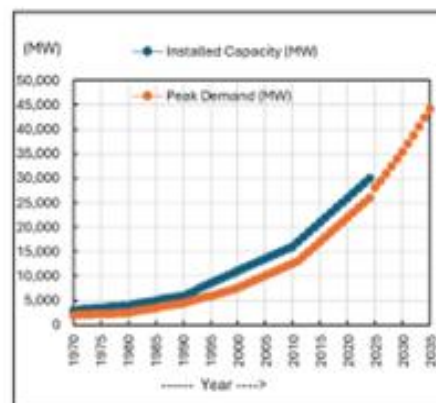


Figure 6. Peak demand Vs the installed capacity of Pakistan's Electrical energy from 1970 to 2024. The installed capacity grows sufficiently with the addition of thermal energy generation which becomes expensive to produce (Arshad & Shamshad, 2022; NEPRA, 2024; WAPDA, 2024).

ISSN 2289-8786 (online)

Transactions on Science and Technology

Volume 12, Issue Number 3, September 2025

E-ISSN: 2289-8786

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Transactions on Science and Technology

Volume 12, Issue Number 3, September 2025

Table of Contents

Original Articles

- | | | |
|---|------------|--|
| <i>Nur Syahirah Ibrahim; Adibah Shuib;
Zati Aqmar Zaharudin.</i> | ToST123OA1 | Optimizing multi-objective lecturer-to-course assignments using the modified Hungarian method: Balancing competency and preferences |
| <i>Sijun Tao; Nur Hamizah Abdul Ghani;
Mohd Rivaie.</i> | ToST123OA2 | Enhancing linear regression forecasting with an improved conjugate gradient method: Application to economic data |
| <i>Oliver Dean John;
Monjia Belleza Cosmas Mojulat;
Eunice Lua Hanry; Annals Tatenda Mushunje;
Noumie Surugau.</i> | ToST123OA3 | Evaluation of phytochemical content and antioxidant activity in <i>Rubus fraxinifolius</i> fruit extracts using different solvents |
| <i>Mohd Hizwan Ajud; Borhan Abdul Haya;
Sharif Azmi Abdurahman; Azwan Awang;
Mohamadu Boyie Jalloh; Clament Chin Fui Seung;
Siti Suliza Salamat; Januarius Gobilik;
Salumiah Mijin.</i> | ToST123OA4 | Sweet corn induced shading reduces groundnut yield and alters dry matter partitioning in a durian-based intercropping system |

Review Articles

- | | | |
|---|------------|--|
| <i>Abid Karim; Sheikh Kamaluddin; Mahmood Iqbal;
Arif Karim; Muhammad Walid; Mansoor Hai.</i> | ToST123RA1 | The impact of quick fixes, policies and regulation on the energy crises in Pakistan |
|---|------------|--|