RExQUAL: Supplementary material

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I. Introduction

This document provides high-resolution versions of the figures from the RExQUAL paper to enhance clarity and improve overall readability, ensuring that all details are easily discernible.

II. Figures

The figures are presented in the same order as in the original paper to maintain consistency and clarity.

They are organized as follows:

- Figure 1. Flowchart of the methodology.
- Figure 2. Explanations generated for a random instance of the electric demand dataset (time horizon $h = 2$) (a) SHAP (b) RULEx (c) LIME.
- Figure 3. Explanations generated for a random instance of the SAGRA dataset (time horizon $h = 4$). (a) SHAP (b) RULEx (c) LIME.
- Figure 4. Feature importance for each input time window and for the features in the electric demand dataset. (a) SHAP (b) RULEx (c) LIME (d) Random.
- Figure 5. Feature importance values for each input time window and for the features in the SAGRA dataset. (a) SHAP (b) RULEx (c) LIME (d) Random.
- Figure 6. RExQUAL metric across the prediction horizons. (a) Electric demand dataset (b) SAGRA dataset.

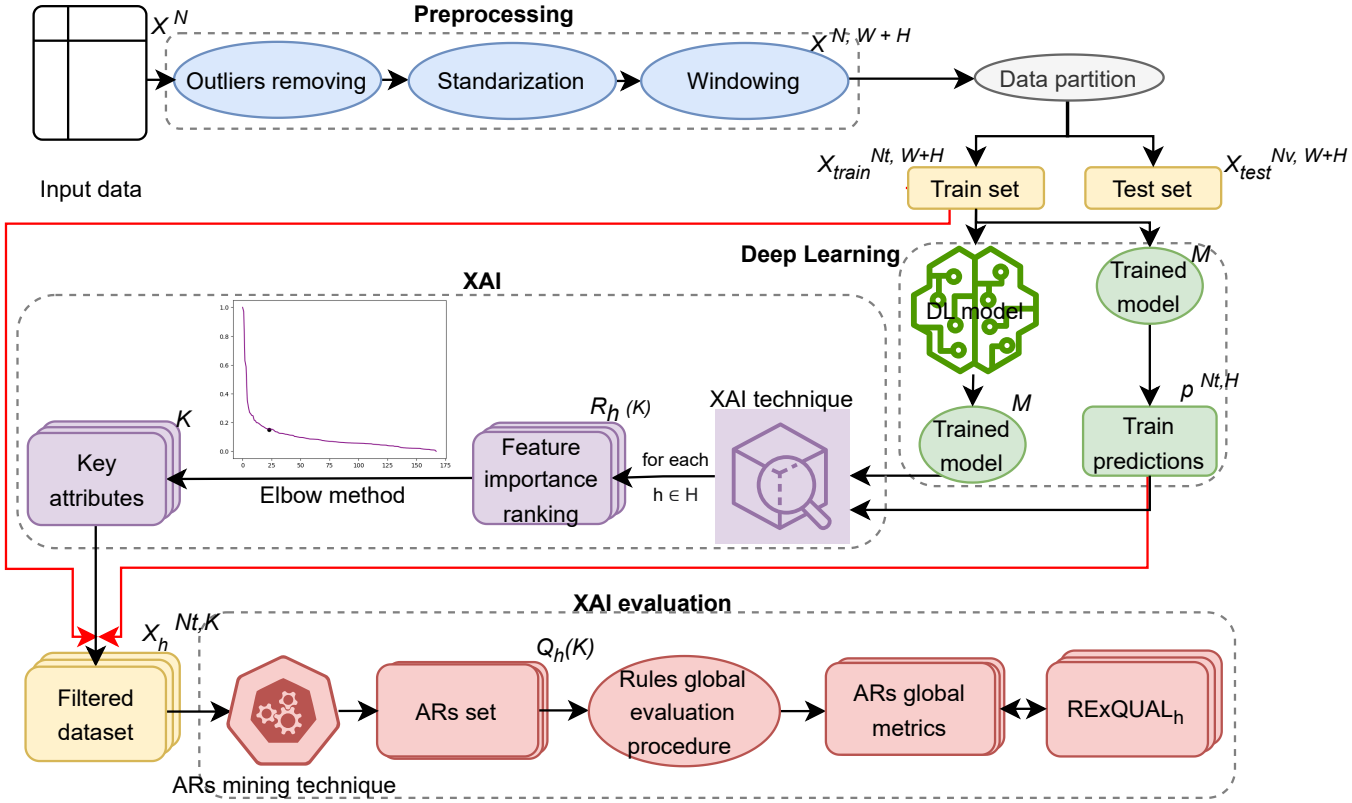


Fig 1. Flowchart of the methodology.

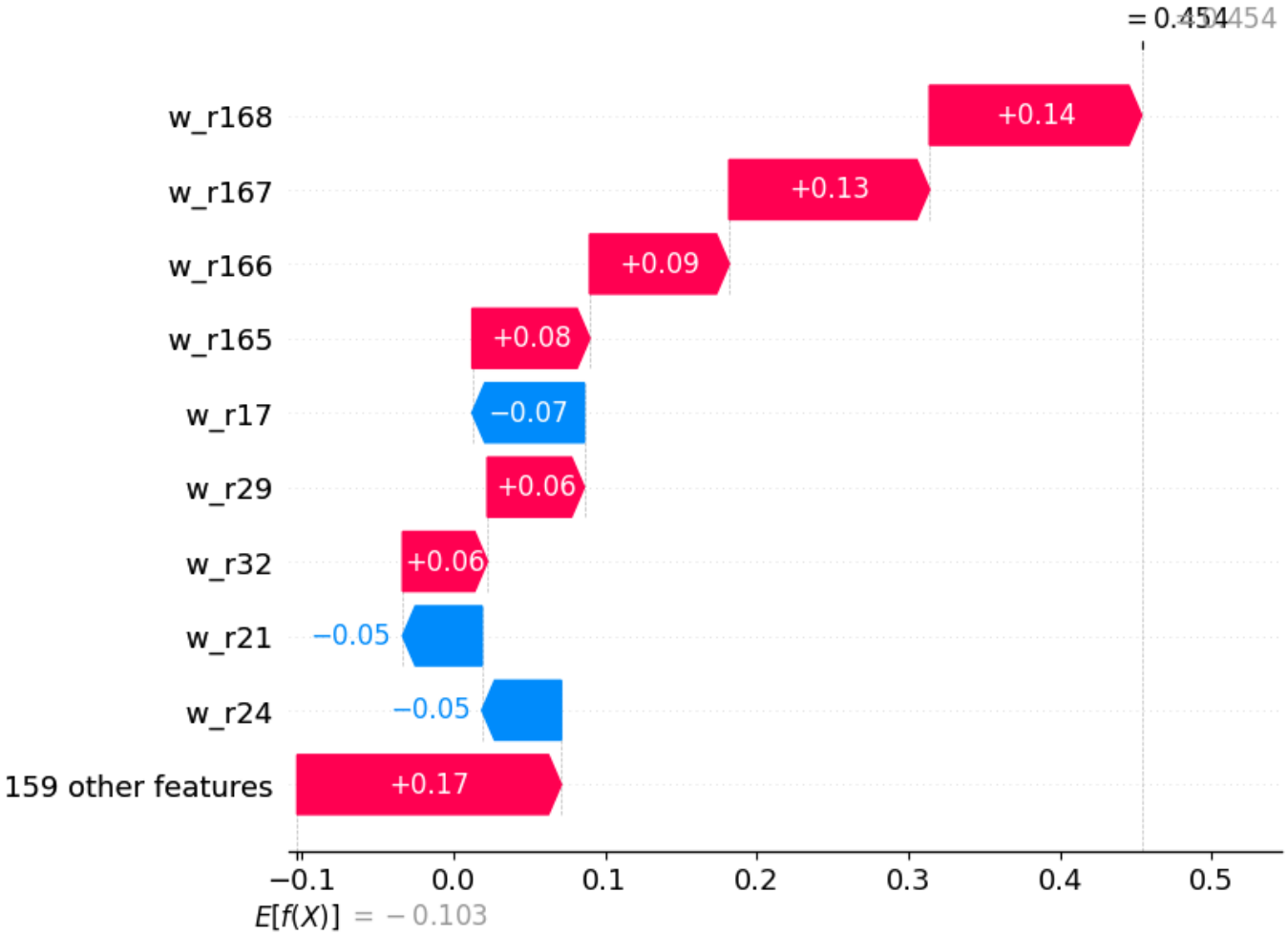


Fig 2. Explanations generated for a random instance of the electric demand dataset (time horizon $h = 2$). (a) SHAP.

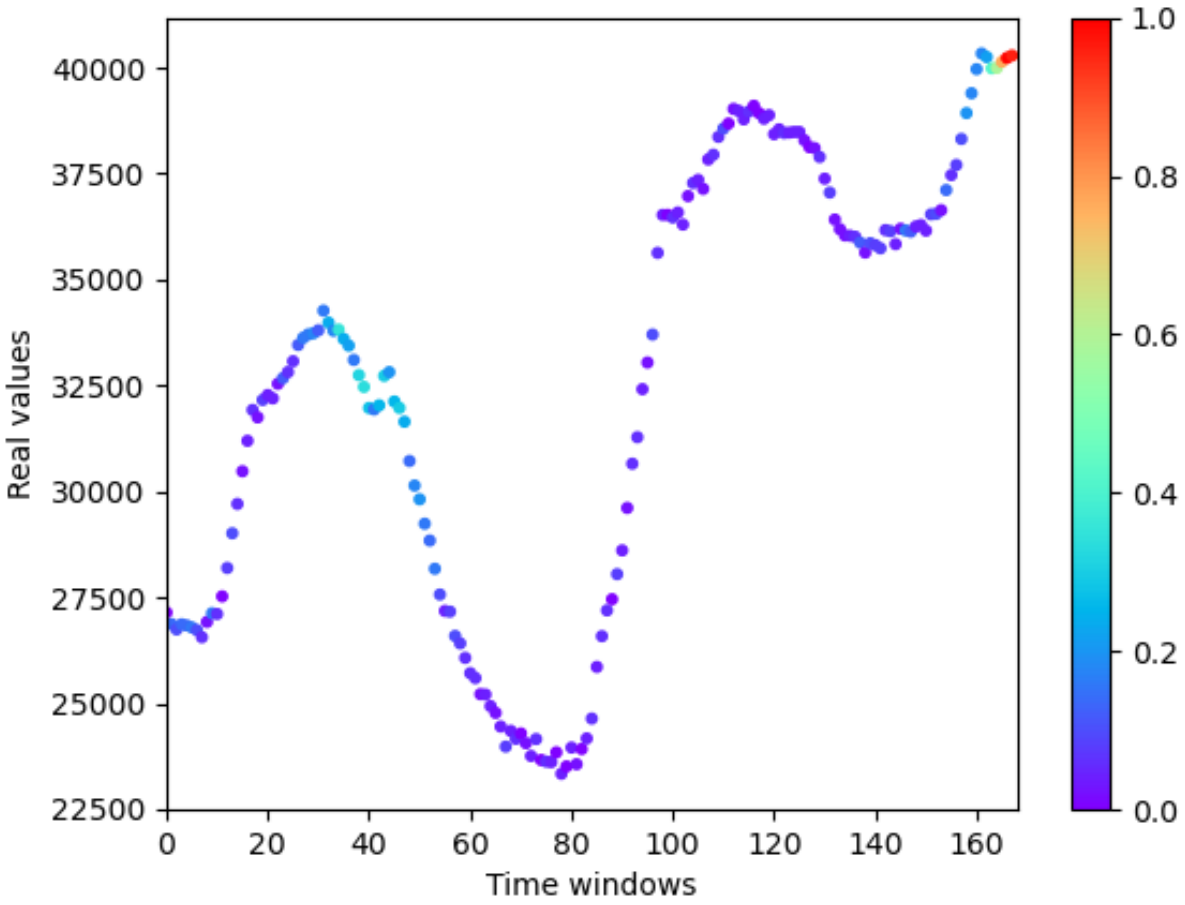


Fig 2. Explanations generated for a random instance of the electric demand dataset (time horizon $h = 2$). (b) RULEx.

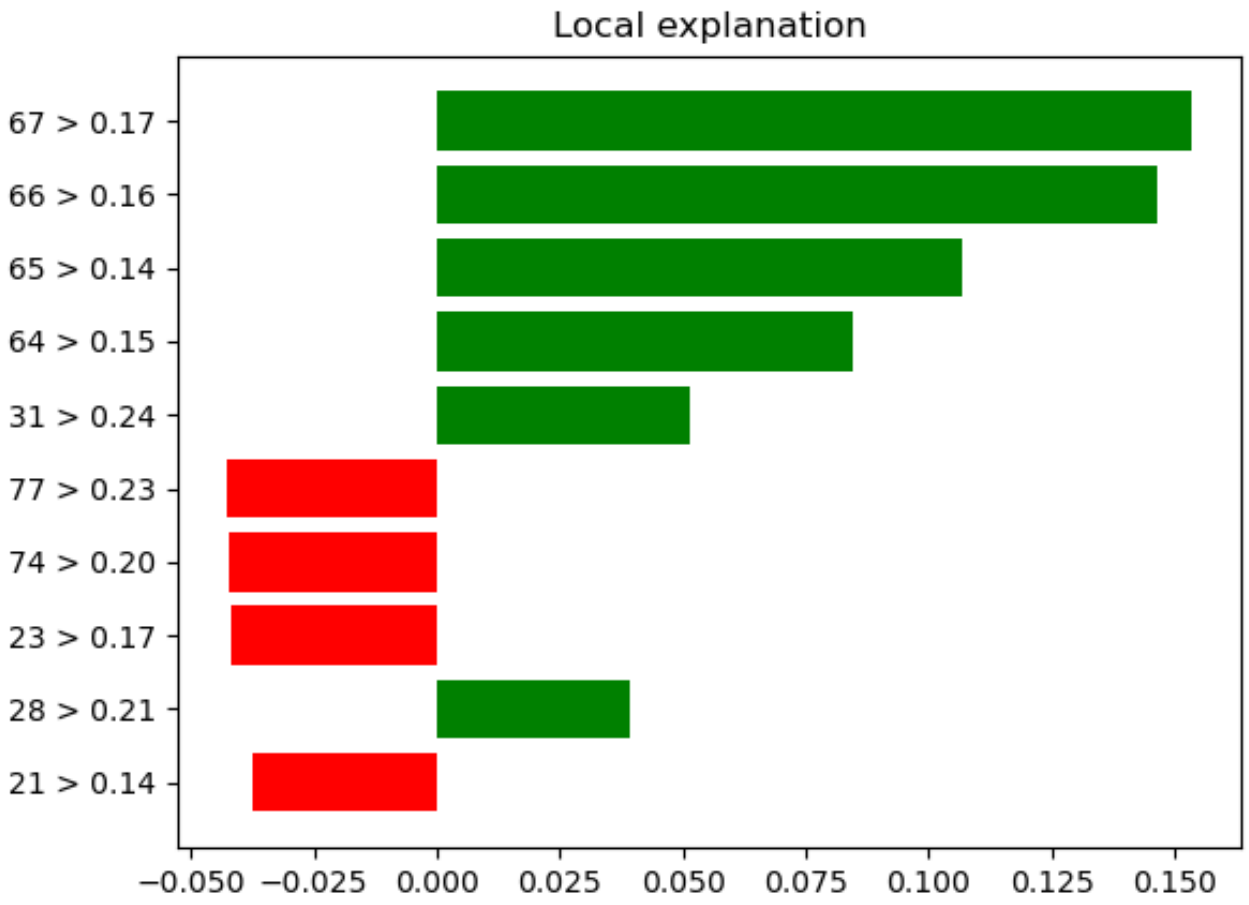


Fig 2. Explanations generated for a random instance of the electric demand dataset (time horizon $h = 2$). (c) LIME.

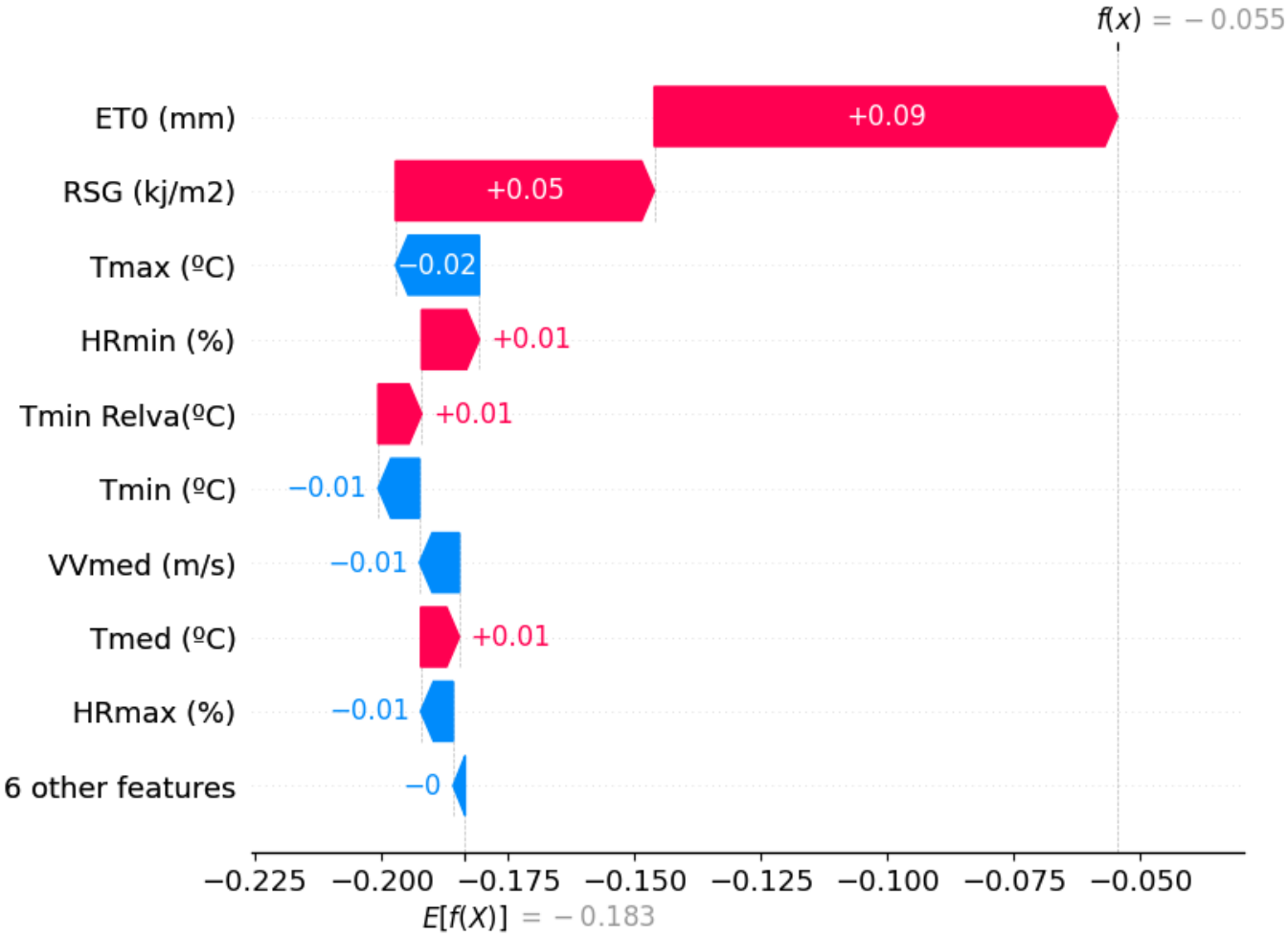


Fig 3. Explanations generated for a random instance of the SAGRA dataset (time horizon $h = 4$). (a) SHAP.

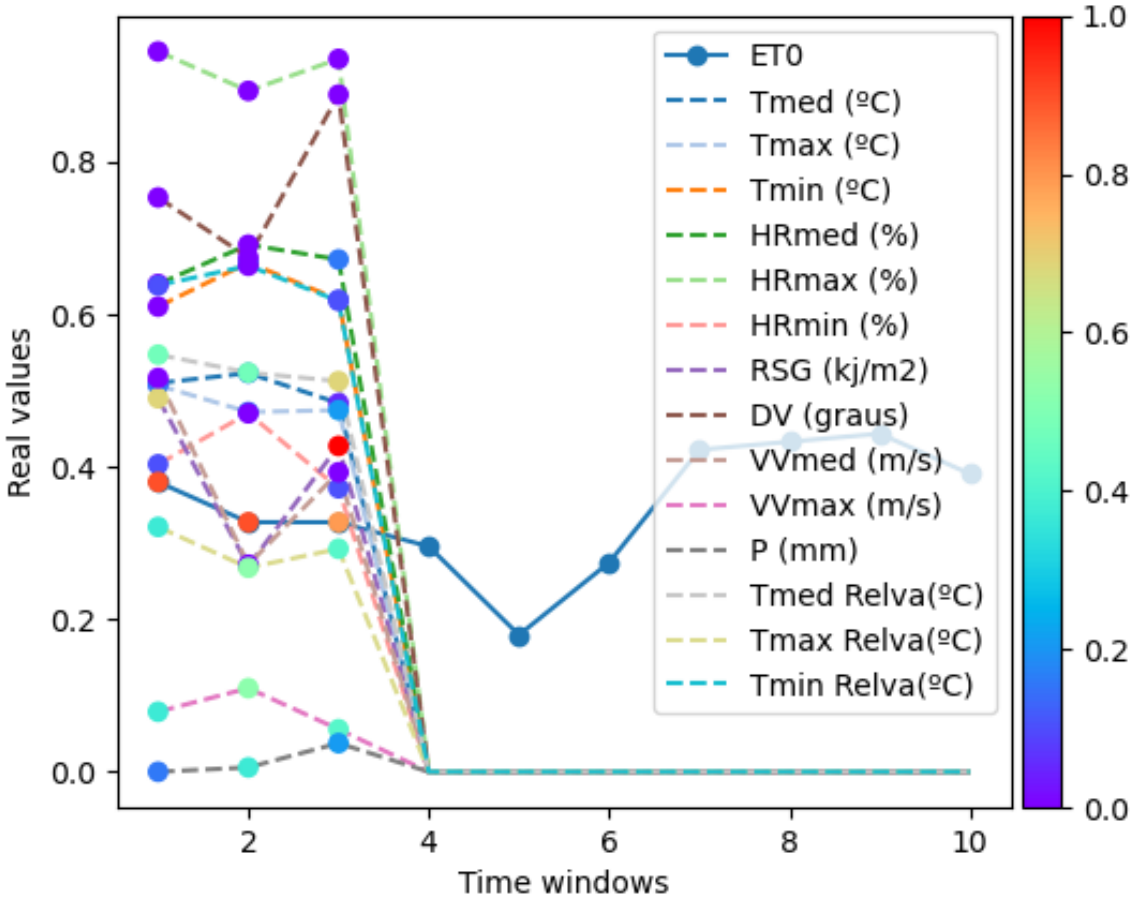


Fig 3. Explanations generated for a random instance of the SAGRA dataset (time horizon $h = 4$). (b) RULEx.

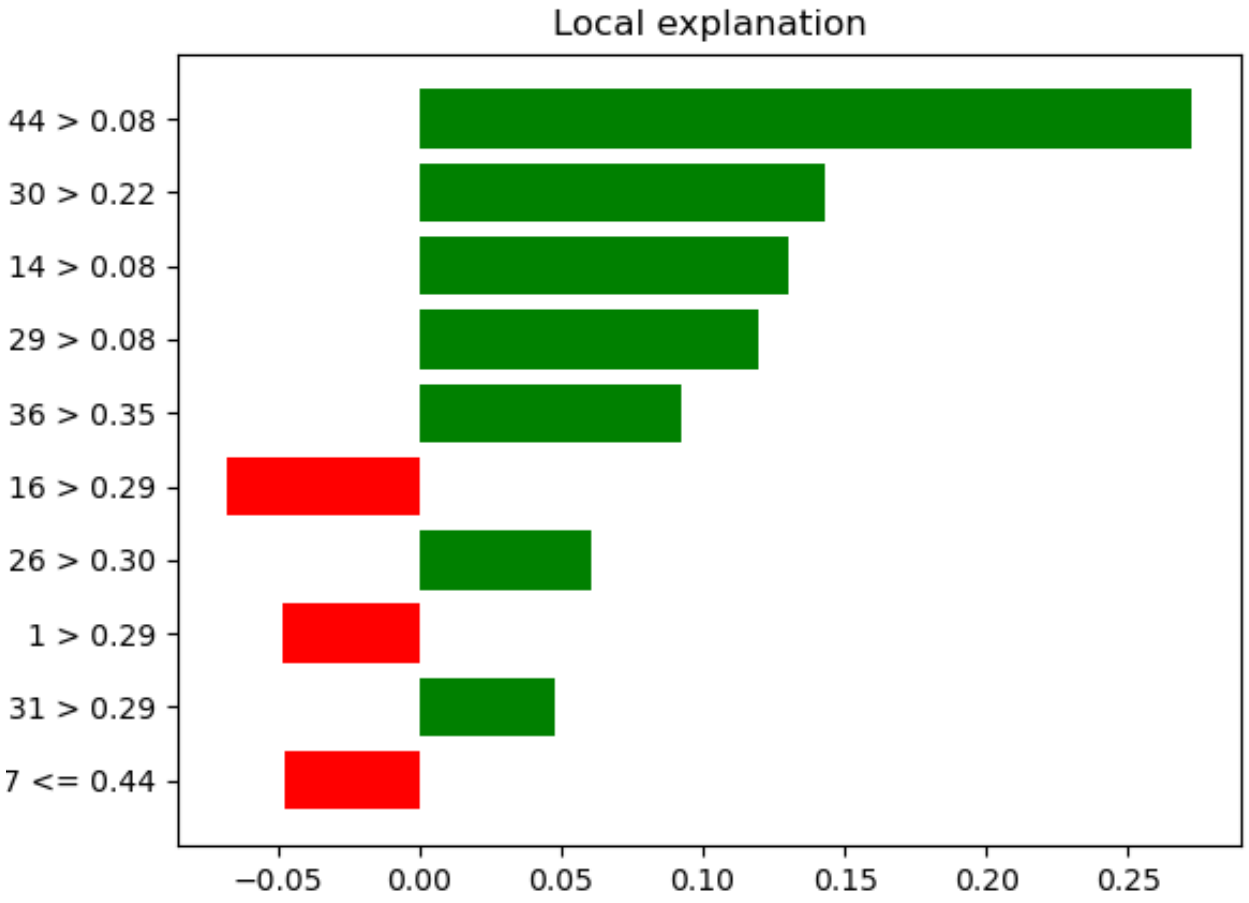


Fig 3. Explanations generated for a random instance of the SAGRA dataset (time horizon $h = 4$). (c) LIME.

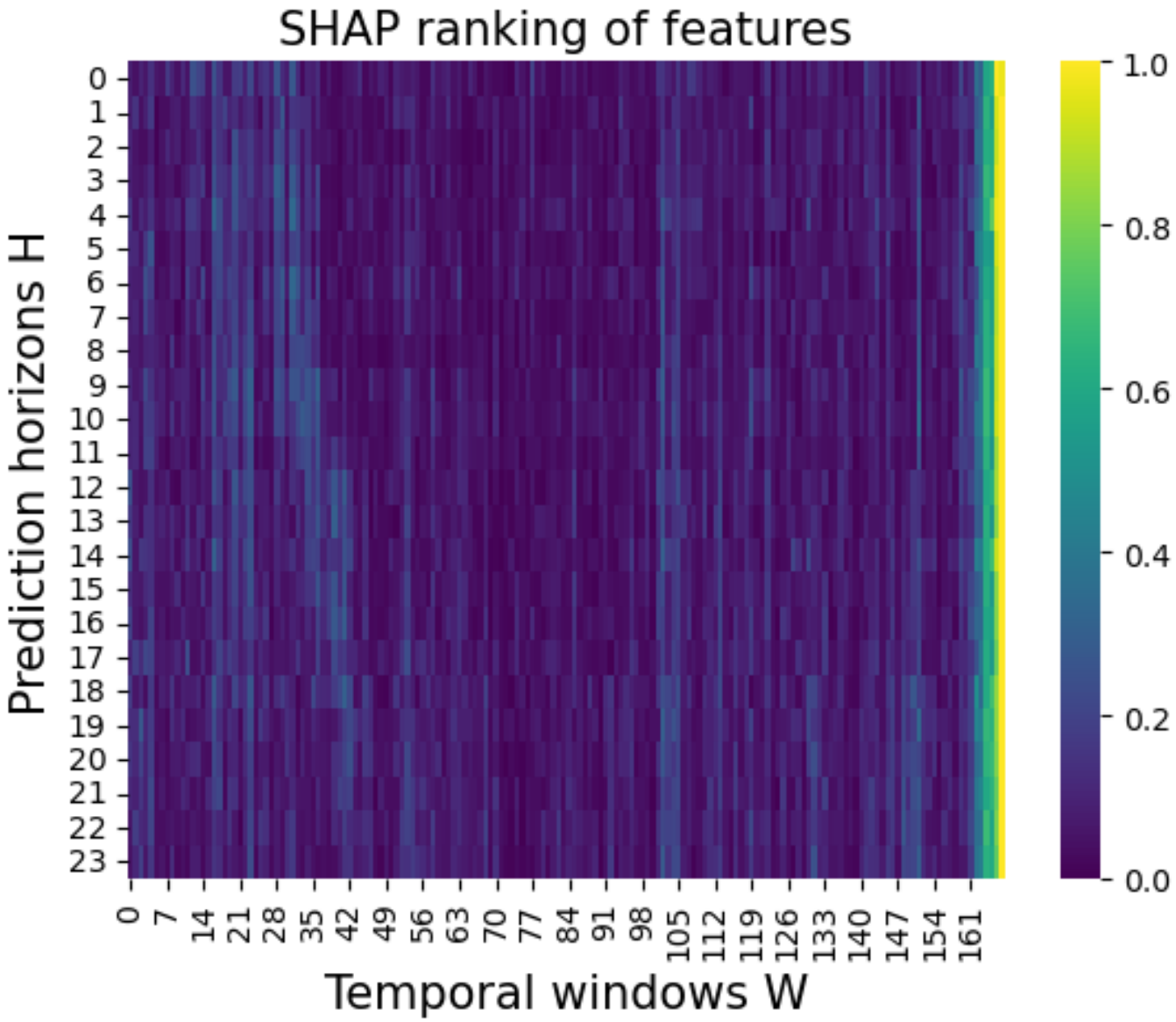


Fig 4. Feature importance for each input time window and for the features in the electric demand dataset. (a) SHAP.

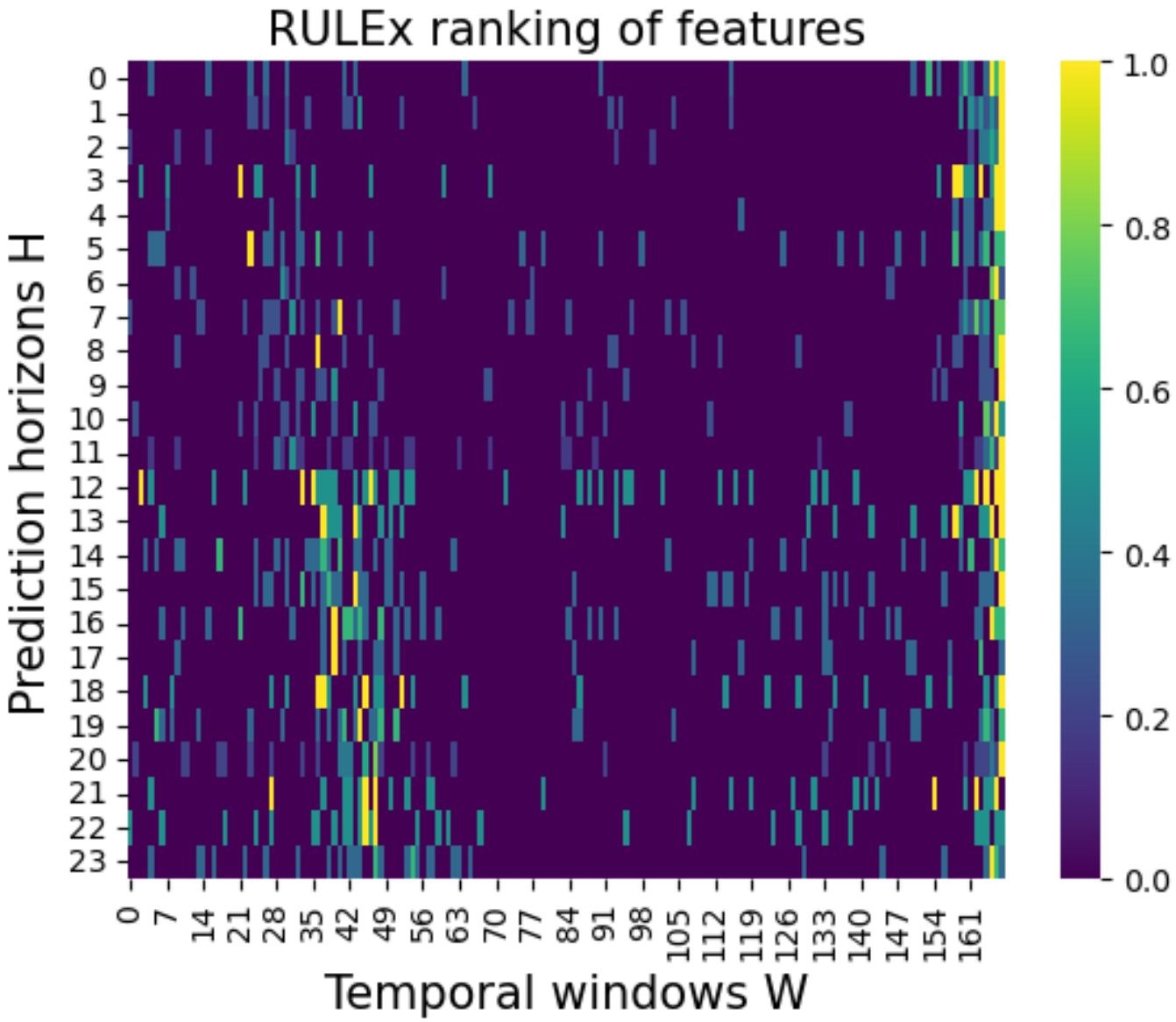
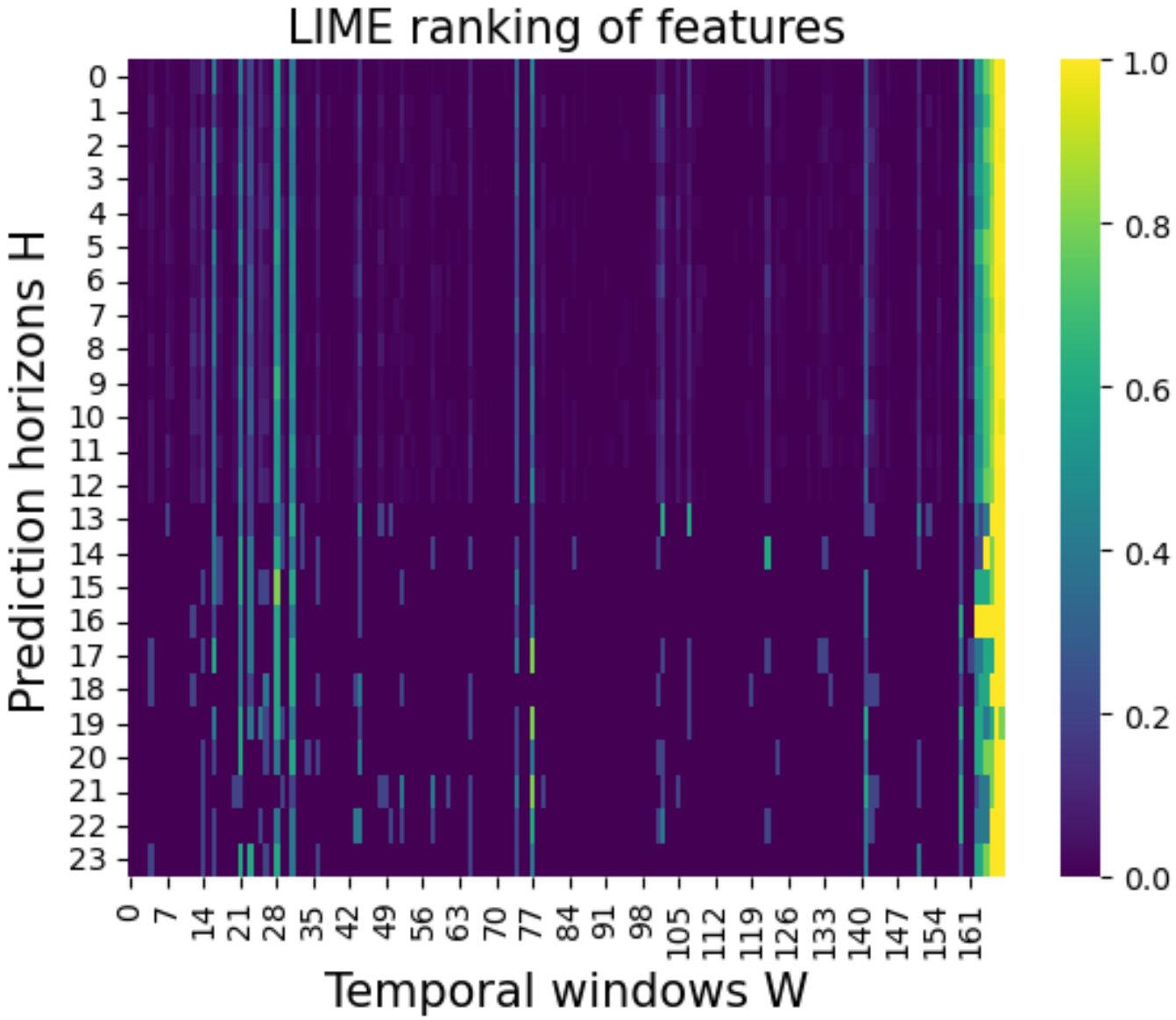


Fig 4. Feature importance for each input time window and for the features in the electric demand dataset. (b) RULEx.



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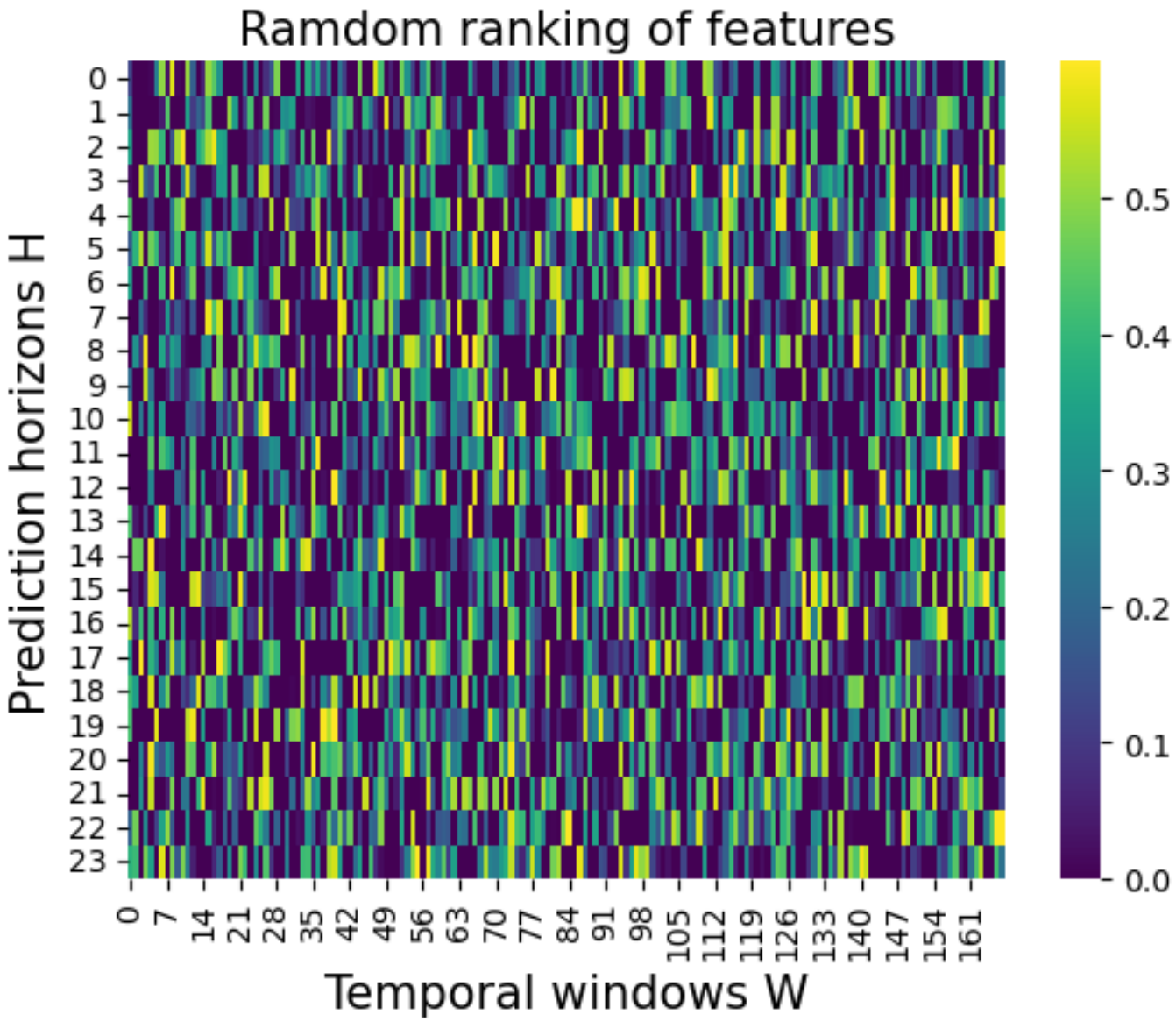

Fig 4. Feature importance for each input time window and for the features in the electric demand dataset. (d) Random.

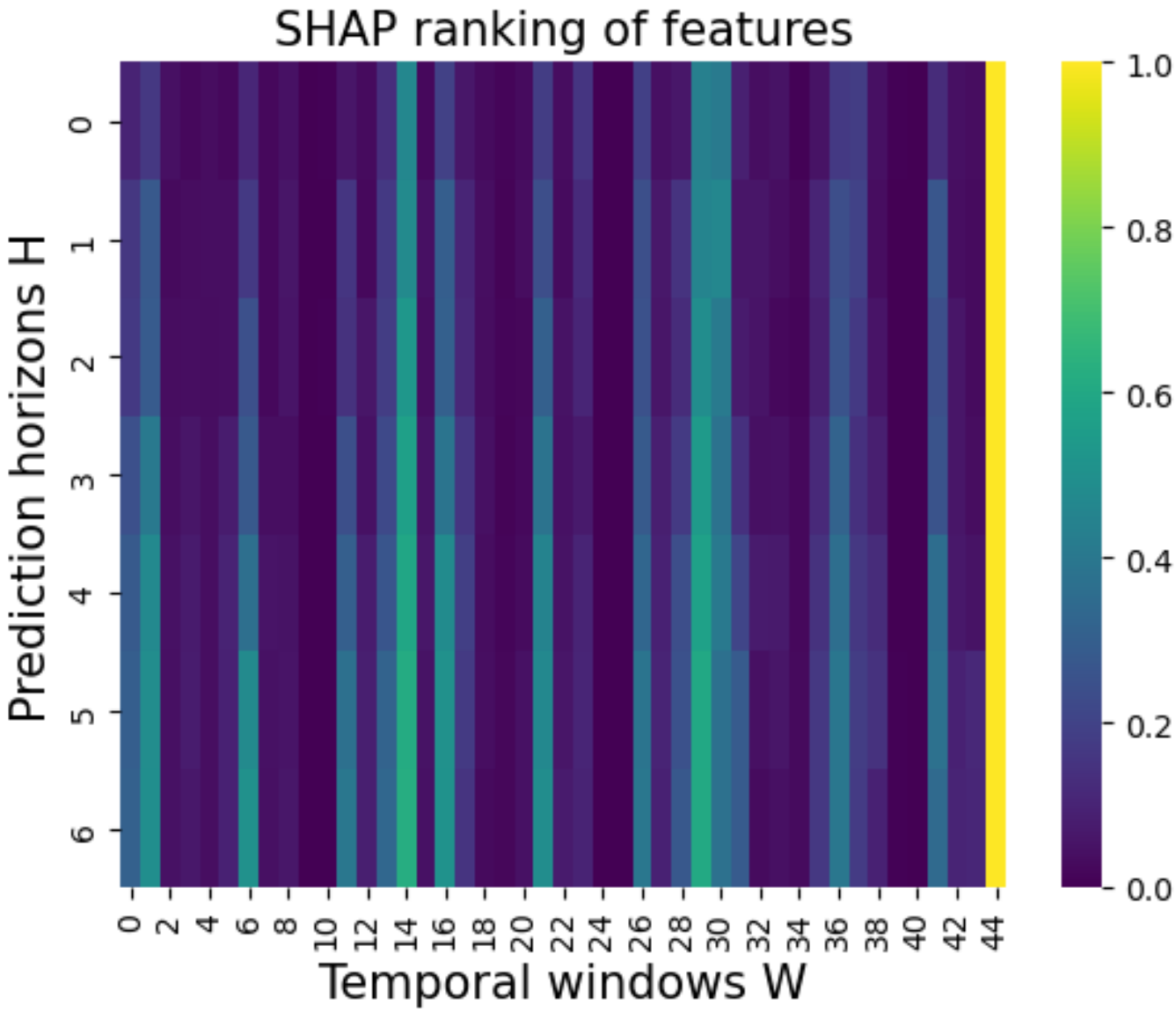

Fig 5. Feature importance values for each input time window and for the features in the SAGRA dataset. (a) SHAP.

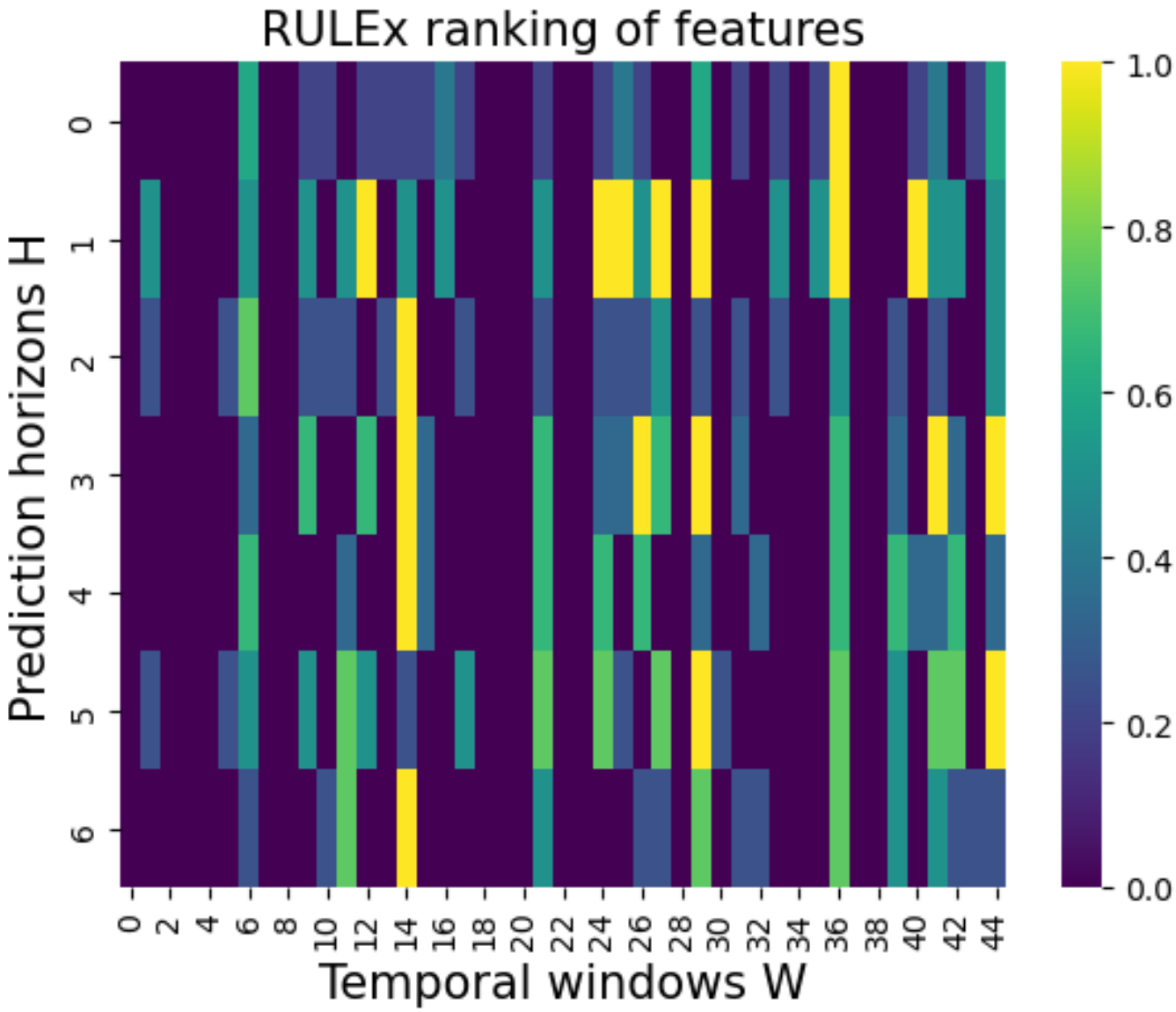

Fig 5. Feature importance values for each input time window and for the features in the SAGRA dataset. (b) RULEx.

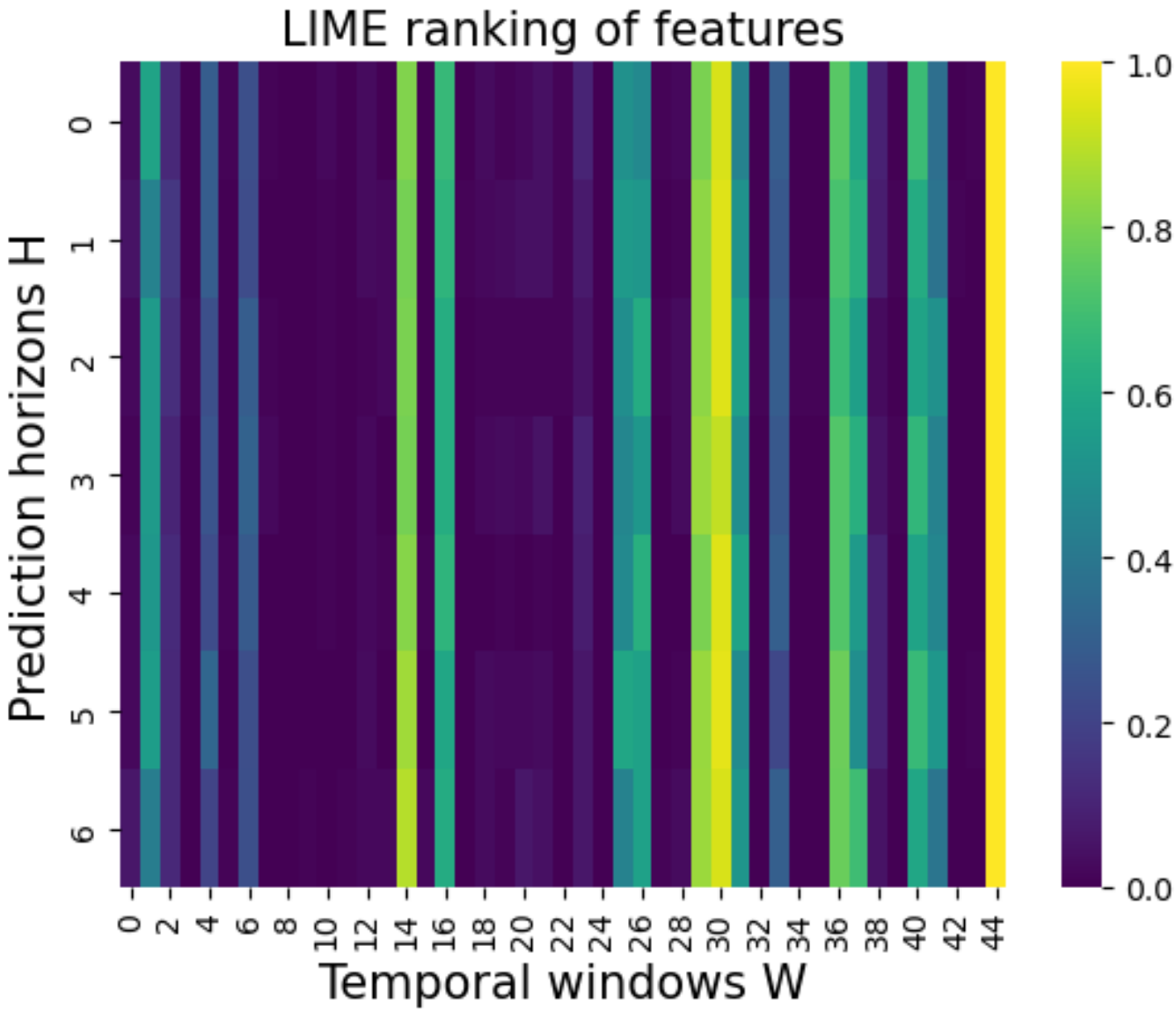

Fig 5. Feature importance values for each input time window and for the features in the SAGRA dataset.(c) LIME.

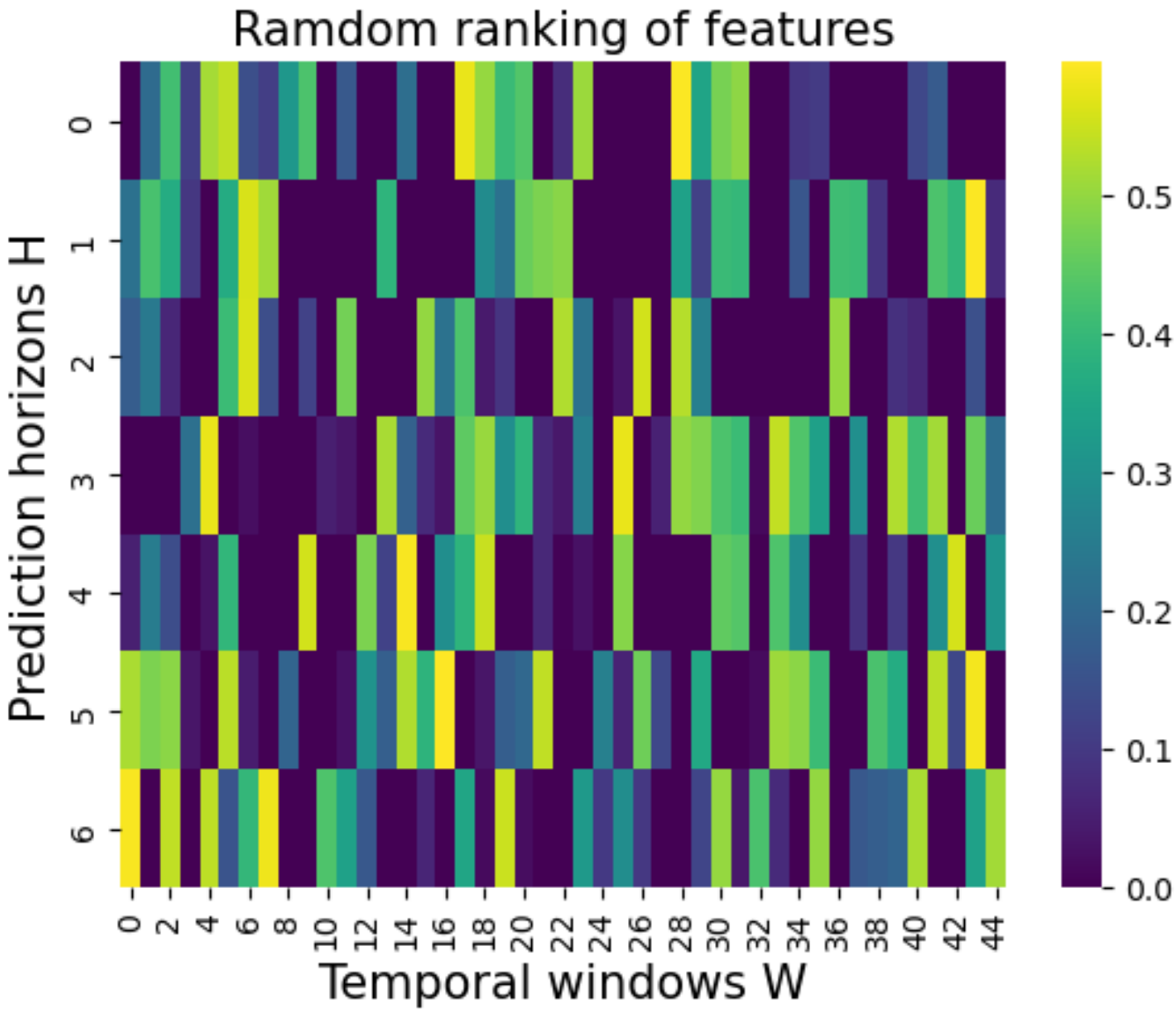

Fig 5. Feature importance values for each input time window and for the features in the SAGRA dataset. (d) Random.

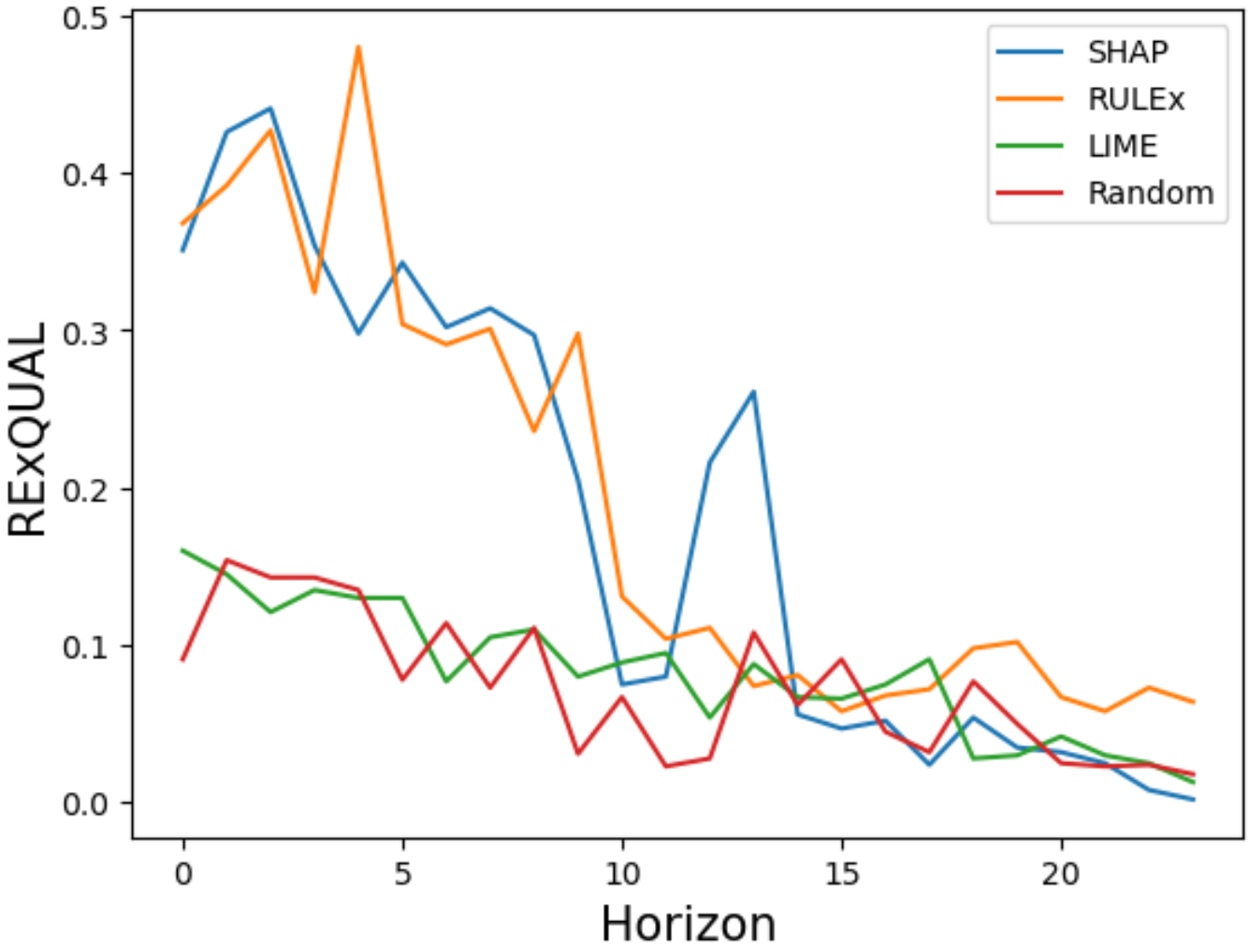

Fig 6. RExQUAL metric across the prediction horizons. (a) Electric demand dataset.

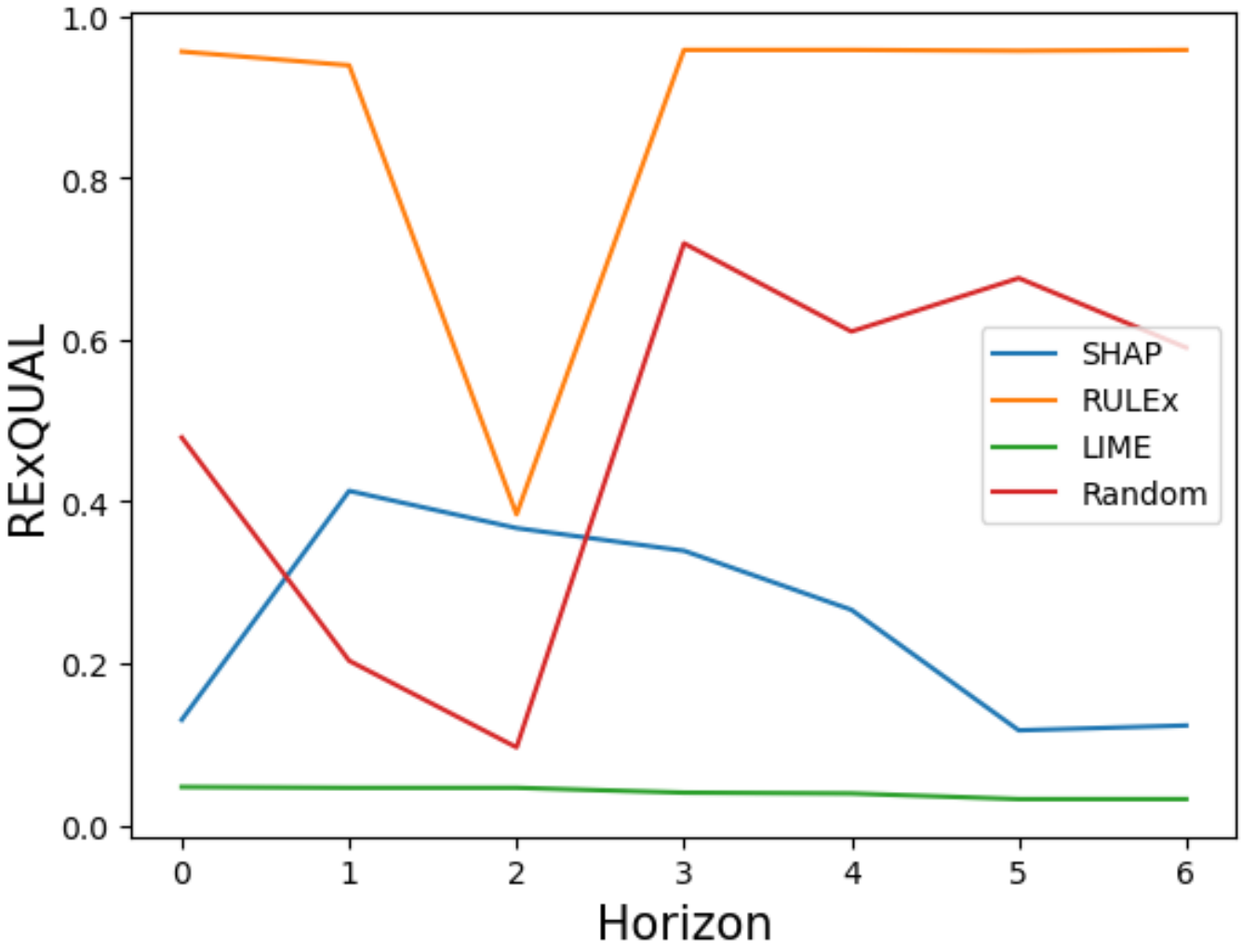

Fig 6. RExQUAL metric across the prediction horizons. (b) SAGRA dataset.