

I-REC(E) The Evident Registry in Numbers

Eessa Mansoor, I-REC(E) Product Development Manager I-REC Istanbul 2023

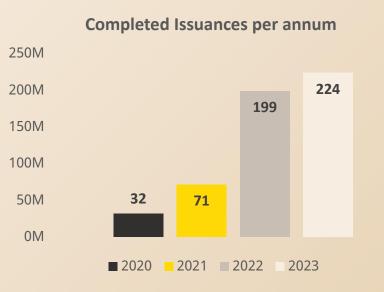
How many I-REC(E) certificates were issued in 2023 YTD?

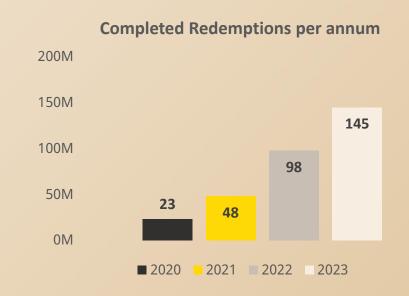
223.73 million

This volume is equivalent to <u>40%</u> of total I-REC(E) issuances <u>since 2014*</u>

*Total: 560.09 million

I-REC(E) Landscape An overview





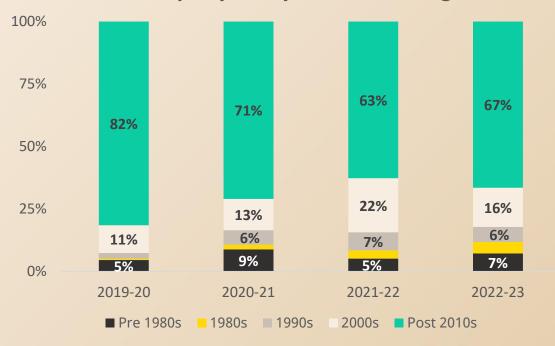


- Key Takeaways:
- 112% increase in issued certificates and 148% increase in redemptions executed in 2023, compared to the previous year
- Significant growth in 2023 reflects increased global adoption and continued trust in I-REC(E)

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A quick dip into the data!

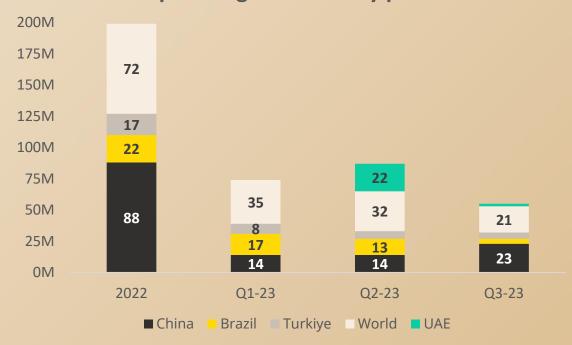
Issuances per year by commissioning date





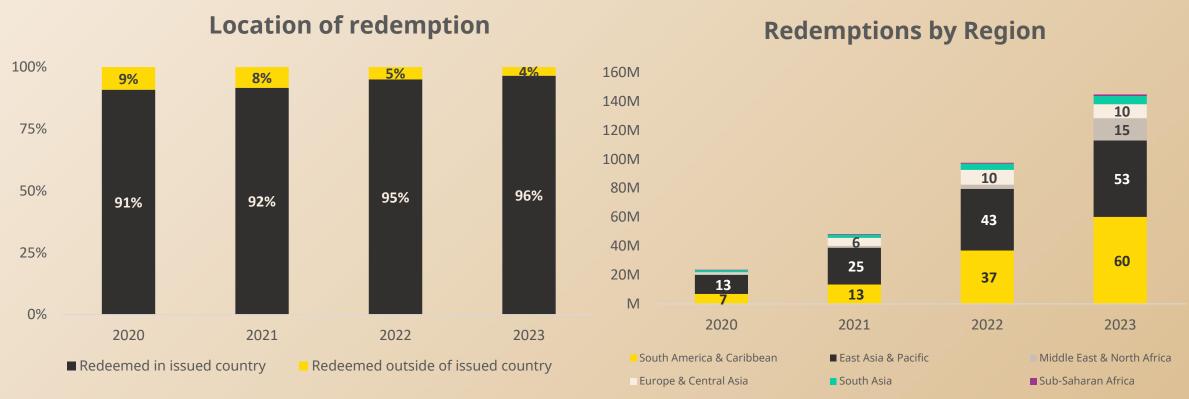
• Following RE100's proposed change to its technical criteria in October 2022 for enforcement from January 2024, there's already a visible reduction in I-REC(E) Issuance from facilities commissioned in the 2000s over the past 12 months.

Top issuing countries by period



Over the last few years, the top 3 issuing countries have been China, Brazil and Türkiye, however, Brazil overtook Türkiye in Q1-23, while UAE made a surprise jump to the top in Q2-23 following the issuance of ~19M certificates

A quick dip into the data! II



Key Takeaways:

 As the number of I-REC(E) authorised issuing countries grows through the years, we see that the percentage of certificates redeemed outside their issued countries decreases The key regions most actively participating in I-REC(E) certificates are East Asia and South America with growth from the Middle East in 2023

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Growing global renewable energy trends

Corporate Clean Energy Procurement

- 100% Renewable Goals
- Role of PPAs and EACs

Emissionality

- Impact Assessment
- Emissions First Partnership

24/7 Carbon Free Electricity

- Beyond Annual Matching
- Mix of Renewables and Storage



EAC Market Trends

- Blockchain-based Trading Platforms
 - Innovation in trading: Tokenising I-REC(E) for enhanced efficiency and transparency
- Emissions-adjusted Price Assessments
 - S&P's Global's new approach: Valuing US RECs based on actual emissions impact
- Growth of Compliance Market
 - Emerging Chinese GECs and Australian REGOs: Potential market shift

Market Dynamics

The SBTi opens Call for Evidence on the effectiveness of Environmental Attribute Certificates in Climate Targets

21st Sep 2023

The Science Based Targets initiative (SBTi) has opened a Call for Evidence on the Effectiveness of the Use of Environmental Attribute Certificates in Corporate Climate Targets.

The Science Based Targets initiative (SBTi) has today opened a <u>Call for Evidence on the Effectiveness</u> of the Use of Environmental Attribute Certificates in Corporate Climate Targets. The aim is to help the corporate climate action ecosystem understand whether different instruments can credibly drive decarbonization and support corporate emission reduction claims.

All stakeholders are invited to submit their evidence for review by the SBTi. The call is open for nine weeks between 21 September to 24 November 2023. A timeline for the next steps and all the evidence submitted through this process, will be made publicly available on the SBTi website.

[1] https://www.einnews.com/pr_news/656860973/renewable-energy-certificate-market-to-receive-overwhelming-hike-in-revenues-by-2030

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Strengths

Continued growth of I-REC(E) with 4 new countries onboarded in 2023 and 9 more pending

Over 95% share of the voluntary EAC market outside of North America and Europe

Global REC market valued at \$9.3bn in 2020 and projected to reach \$103.2bn by 2030 [1]

Opportunities

Composite certificates may enable onward certification of multiple products

 e.g. I-REC(E)s forming part of H₂ certification

Areas for Improvement

Facilitating further growth in the issuance and redemption of I-REC(E)s.

External Pressures

GHGP & SBTI's ongoing evaluations

Beyond the role of Issuer: Foton

- Addressing Unredeemed Certificates
 - Facilitating redemption of older vintages at reduced rates to encourage future commitments
 - Highlighting market trends of delayed redemption
- Dual Role: Issuer and Trading Platform Operator
 - Enhancing market awareness and education through clear price transparency of certificates
 - Facilitating regional collaboration for a comprehensive market view
- Foton's Impact
 - Supporting a global product with local implementation

The future of the I-REC(E) Registry

High-level product development roadmap

Done	Now	Potential for development	
Platform Integrations	UX enhancements (e.g. Notifications, in-app guidance) *A to-be-announced feature for release in coming months	I-REC(E) Knowledge Portal & Locator Bulk Transfers and Redemptions Enhanced data reports Grouped facility issuances Interactive Registrant guidance	Labelling Schemes, Redemption Authorities & Verifiers Digital Onboarding Battery Storage

Thank you

Eessa Mansoor eessa.mansoor@evident.global

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