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7. Short News

1. Isobutanol

As part of its expanding biofuel strategy, the Indian government is evaluating blending diesel with up to 15% isobutanol to cut down expensive crude oil imports.

1. **What it is -** Isobutanol is an alcohol-based biofuel produced via the fermentation of biomass, functioning as an alternative or additive to conventional fossil fuels.
2. **Diesel Blending -** Unlike standard ethanol which is predominantly blended with petrol, isobutanol is being tested for blending directly with **diesel**.
3. **Higher Energy Content -** It possesses a significantly higher energy density than ethanol, making its combustion characteristics much closer to traditional petroleum.
4. **Better Mileage -** Due to its superior energy efficiency, it has a noticeably smaller negative impact on vehicle mileage compared to ethanol-blended fuels.
5. **Low Moisture Absorption -** It is less hygroscopic (absorbs less moisture from the air), preventing water contamination challenges during large-scale storage.
6. **Non-Corrosive Nature -** It is far less corrosive to infrastructure, meaning it won't easily degrade fuel distribution pipelines, storage tanks, or vehicle engine parts.
7. **Infrastructure Friendly -** Can be rolled out with relatively minor modifications to the country's existing fuel distribution networks and standard internal combustion engines.
8. **Strategic Benefit -** Blending up to 15% into diesel directly advances India's energy security, carbon emission targets, and agricultural economy by creating a market for biomass.

2. Jan Samarth Portal

The digital platform has successfully completed **four years** of operation, marking a milestone in boosting digital financial inclusion and credit delivery in India.

1. **Launch & Purpose -** Launched in 2022, it is a single-window digital platform designed to connect citizens directly with government benefits and loan schemes.
2. **Scheme Coverage -** The portal aggregates and hosts **16 credit-linked government schemes** under a single digital roof.
3. **Cross-Sectoral Reach -** It facilitates institutional credit across diverse sectors including agriculture, business livelihoods, renewable energy, and housing.
4. **Lending Network -** It acts as a massive digital bridge, onboarding **269 lending institutions** including public/private banks, NBFCs, and cooperative banks.
5. **Real-Time Verification -** Features automated, end-to-end digital processing linked to official government databases for instant identity and eligibility checks.
6. **Integrated Databases -** Real-time verification is powered through seamless backend integration with UIDAI, UDYAM (MSME), AgriStack, GST, and the CBDT (Income Tax).
7. **Language Inclusivity -** To ensure rural penetration and ease of access, the entire user interface is accessible in **8 different languages**.
8. **Core Objective -** Its ultimate aim is to eliminate bureaucratic delays, reduce human intervention in loan approvals, and provide hassle-free credit to the unbanked.

3. Tax-Free Government Bonds for Foreign Investors

The Government of India has completely abolished capital gains tax and withholding tax on Foreign Institutional Investors' (FIIs) and Foreign Portfolio Investors' (FPIs) investments in government securities, effective April 1, 2026.

1. **LTCG Exemption -** Foreign investors are now entirely exempt from the **12.5% Long-Term Capital Gains (LTCG)** tax on government bond profits (held for over 12 months).
2. **STCG Exemption -** The **30% Short-Term Capital Gains (STCG)** tax on government bond profits (held for 12 months or less) has been completely removed.
3. **Withholding Tax Scrapped -** The withholding tax deducted at source on interest income earned from these government bonds has been abolished.
4. **Extended Beneficiaries -** These sweeping tax exemptions apply uniformly to FIIs, FPIs, and explicitly include the **Bank for International Settlements (BIS)**.
5. **Attracting Global Capital -** The primary objective is to make Indian sovereign debt highly lucrative, driving massive foreign capital inflows into the local debt market.
6. **Rupee & BoP Support -** The move is strategically timed to support the Indian Rupee against depreciation and bridge the projected **Balance of Payments (BoP)** deficit.
7. **External Stability -** It cushions India's external sector against global economic shocks and compensates for periods of weak or volatile foreign direct investments.
8. **Deepening the Bond Market -** By removing fiscal friction, India aims to tightly integrate its debt markets with global indices, reducing the government's domestic borrowing costs.

4. India's GDP Growth at 7.7% in FY 2025–26

MoSPI released the Provisional Estimates of GDP for FY 2025–26, revealing India's economy expanded by **7.7%**, outpacing previous projections and the prior year's 7.1% growth.

1. **The Milestone -** Real GDP growth hit 7.7% for FY 2025–26, higher than the advance estimate of 7.6%, signaling strong macroeconomic momentum.
2. **Manufacturing Surge -** Growth was heavily anchored by a spectacular **10.7% expansion in the manufacturing sector**.
3. **Robust Services -** The service sector—encompassing trade, transport, hotels, communication, and broadcasting—grew by a massive **11%**.
4. **Consumption Growth -** Private Final Consumption Expenditure (PFCE), which maps overall household spending, registered a solid growth rate of 7.7%.
5. **Investment Boom -** Gross Fixed Capital Formation (GFCF), the metric that reflects business investments and asset creation, expanded by 8.2%.
6. **Domestic Resiliency -** Economic growth was largely insulated from global slowdowns, driven primarily by strong domestic economic fundamentals and internal demand.
7. **Capex Push -** Massive, continued central government infrastructure spending (Capital Expenditure) created strong multiplier effects across construction and core industries.
8. **Statistical Authority -** The data was compiled and released by the National Statistical Office (NSO) under MoSPI, utilizing **2022–23 as the revised Base Year**.

5. District Domestic Product (DDP) Estimates Guidelines

The NSO has released Draft Guidelines for the Compilation of District Domestic Product (DDP) Estimates aligned with the revised base year of 2022-23.

1. **Uniform Framework -** The guidelines establish a comprehensive, standardized blueprint for calculating economic output at the district level across all States and UTs.

2. **Methodological Standardization -** Its core objective is to ensure absolute consistency, comparability, and statistical rigor across varying state economic models.
3. **What is DDP -** DDP calculates the total monetary value of all final goods and services produced strictly within the geographical boundaries of a district in a given timeframe.
4. **Granular Counterpart -** It acts as a micro-level statistical counterpart to the Gross State Domestic Product (GSDP) and the national Gross Domestic Product (GDP).
5. **Local Economic Structure -** It provides deep, hyper-local insights into economic performance, revealing exactly which sectors drive wealth in specific regions.
6. **Identifying Backwardness -** By standardizing metrics, it allows policymakers to accurately pinpoint underperforming, economically backward districts.
7. **Evidence-Based Planning -** Enables district-specific, data-driven planning and targeted financial allocations rather than broad, top-down state policies.
8. **Decentralized Governance -** Supports the spirit of fiscal federalism by equipping local administrations with the hard economic data needed for sustainable regional growth.

6. 100 Years of Solar Data at Kodaikanal

A historical analysis of over **100 years of continuous solar data** from the Kodaikanal Solar Observatory has yielded critical breakthroughs in understanding the Sun's 11-year activity cycle.

1. **Solar Convection -** Energy generated in the Sun's core moves outward through its layers via convection, creating massive bubbling structures on the solar surface.
2. **Granulation Networks -** This convective movement manifests visually as small-scale granulations and large-scale, web-like patterns called **supergranulations**.
3. **Cell Dimensions -** These supergranular network cells average about 30,000 km in size, possess a lifetime of ~24 hours, and are bounded by cooler lanes roughly 6,000 km wide.
4. **The Breakthrough -** Conducted by the Indian Institute of Astrophysics (IIA), the study discovered that supergranular lane width and intensity are heavily regulated by local magnetic flux.
5. **Solar Cycle Correlation -** The research confirms that while individual solar latitudes don't perfectly mimic the cycle, profound magnetic correlations exist at specific latitudes.
6. **The 11-Year Cycle -** The Sun's magnetic field completely flips roughly every 11 years, causing its magnetic North and South poles to trade places before returning 11 years later.
7. **Sunspot Tracking -** Solar activity is historically tracked by counting sunspots (areas of intense magnetic activity); cycles peak at "solar maximum" and bottom out at "solar minimum."
8. **Predictive Value -** Decoding these historical supergranular patterns drastically improves "precursor methods," helping astronomers forecast the strength and dangers of future solar cycles.

7. Panchayat Advancement Index - PAI

The **Panchayat Advancement Index (PAI)** won the prestigious **Gold Award** at the National Awards for e-Governance (NAeG) 2026 for Digital Transformation through Data Analytics.

1. **What it is -** PAI is India's first comprehensive, highly sophisticated, data-driven framework built to evaluate, score, and rank the performance of Gram Panchayats.
2. **The Developer -** It was conceptualized and developed by the **Union Ministry of Panchayati Raj** to institutionalize accountability and monitor rural growth.
3. **SDG Localization -** It evaluates rural progress by measuring how effectively panchayats implement the Localisation of Sustainable Development Goals (LSDGs) across 9 thematic areas.
4. **Data Scale (PAI 2.0) -** The latest framework tracks and analyzes over **2.6 lakh Gram Panchayats** across India using a matrix of 150 distinct indicators and 230 data points.

5. **Performance Tiers -** Based on final composite data analytics, Panchayats are categorized into five distinct performance tiers, exposing clear gaps in rural governance.
6. **About the Award -** The NAeG is presented annually by the Department of Administrative Reforms and Public Grievances (DARPG) to celebrate pioneering digital governance.
7. **Gold Incentive -** Winning the Gold Award includes a national trophy, an official citation, and a financial incentive of **₹10 lakh** to promote replication.

Viksit Bharat Goal - By replacing guesswork with hard analytics, PAI ensures evidence-based rural budgeting, empowering grassroots gover