Loudoun County Preservation and Conservation Coalition
Budget and Finance Committee

Reducing Single Industry Dependence

--- Summary and Recommendations ---

June 26, 2022

Reducing Single Industry Dependence

--- Highlights ---

Data centers have an important long-term role within Loudoun's balanced growth strategy. Loudoun has a solid partnership with the industry and receives substantial net fiscal benefits from it. However, the meteoric growth of data centers has also raised concerns about their proximity to residential areas, environmental impact, deterrents to economic diversification and over-dependence on their tax revenues.

Revenues - healthy revenue diversification has evolved into rising single industry dependence. Industry tax revenues have surged at a phenomenal average of 32% per year over 2017-2022 – nearly ten times all other Loudoun business. This has produced a fivefold jump over this period to 35% of total FY23 local taxes, driven by a mix of *intense and rising* taxes per acre and *exponential* growth in the industry tax base.

Land use policy – the industry could expand two to three time its current footprint. Over 150 data centers now operate in Loudoun with nearly 28 million square feet of operating capacity on about 2,600 acres. At the current development rate, land use policy now in effect enables the industry to more than *double* data center numbers, land use and capacity by 2030. Rezoning the Transitional Neighborhood Place Type below Braddock Blvd. to 'Dulles Cloud South' (DCS) would *triple* the current footprint.

Consequences – the mix of data center revenue trends and scope for more land use is highly risky. Absent decisive policy change, data center revenue dependence is likely to rise from 35% to about 56% of total local tax revenues by 2030 – and to 65% - 70% by adding DCS. Real estate property taxes in total local tax revenues would fall to about 42% by 2030 (excluding DCS) – far from the County's revenue rebalancing goal of 60%. This path puts Loudoun at serious risk of further dramatic exposure to single industry dependence, generating increased community resistance and adverse environmental impacts, constraints on economic diversification, and greater pressure to put data centers in the TPA and RPA.

Policy response - foster a compromise on a balanced and coordinated plan. One-off changes in tax policy, zoning, or economic diversification will not reduce single industry dependence. Yet, a plan that combines modest and gradual policies shifts *can* achieve the fiscal rebalancing goal and reduce residential, environmental and economic concerns. This plan should (1) promote 'grow in place' land use and accelerated sustainability for data center development; (2) *linked to this,* moderate the business property tax rate over 2024-2030; (3) ease but maintain buoyant growth in public expenditures; (4) continue the recent real estate tax policy; and (5) increase reserves to better manage short-term revenue volatility.

Results – a sustainable development framework of mutual benefit to the industry and Loudoun. This would enable the industry to continue to share in the County's comparative advantages, deepen in-place growth, and benefit from regional data center development in nearby counties. For Loudoun, it would (1) 'right size' industry revenues to help meet the rebalancing goal, (2) establish guardrails against runaway development, such as a 'Dulles Cloud South', (3) deliver badly needed diversification and stability of tax revenues, and (4) *still yield* substantial long-term industry support that funds County services (estimated at 28% of total incremental revenues) and moderates homeowner tax bills. Without this, Loudoun risks revenues inflated far beyond its needs, deeper industry dependence, and possible fiscal instability.

Next steps - shaping the policy response. We recommend that the TLUC Data Center Discussion Series and the Board (1) prepare a concise data center development policy Guide to engender a clear, stable and long-term industry role in Loudoun; (2) incentivize the existing industry to 'grow in place' and reduce the scope of land for data center development; (3) adopt additional use-specific design standards to reduce community impacts and promote standards to accelerate industry environmental sustainability; (4) turn down the 'Dulles Cloud South' proposal and strengthen steps to develop and evaluate options for economic diversification; and (4) articulate a medium-term fiscal direction for tax, spending and reserve policies to help meet the revenue rebalancing goal.

Reducing Single Industry Dependence

Summary and Recommendations

Industry Benefits. Loudoun has substantial comparative advantages in hosting the data center industry, which has a large concentration of facilities with an operating capacity that exceeds the next 5 largest US markets combined. The County's benefits as host are overwhelmingly fiscal and come with relatively low County service needs. Data centers are sound business partners, and fund indirectly County schools and other services, and moderate the tax burden of residents.

Concerns. The sharp growth in County data centers has generated rising public concern about their proximity to residential areas and about environmental impacts with the fivefold increase in commercial electricity usage since 2005.[1] The industry's positive impact on County employment and wages has come with high price impacts on land and services that crowd out economic diversification. Loudoun has also become overly dependent on its fiscal revenues, which carry short-term volatility and longer-term single industry risks. *These trends are likely to accelerate exponentially without a change in policy direction to reduce industry dependence.*

County Initiatives. The County is currently undertaking two initiatives that arise from an effort to balance these benefits and concerns as it hosts the world's largest group of data centers:

- Budget management – rebalance the share of real estate property taxes in total local taxes from 51.5% to about 60% within 5-7 years in line with the Virginia average. More importantly, it is a goal to rebuild a diversified and stable tax base required by Loudoun's Fiscal Policy and needed to maintain sound, responsible financial management; [2] and

- A Data Center Discussion Series - conducted by TLUC to make targeted revisions to policies and regulations concerning data centers throughout Loudoun County.

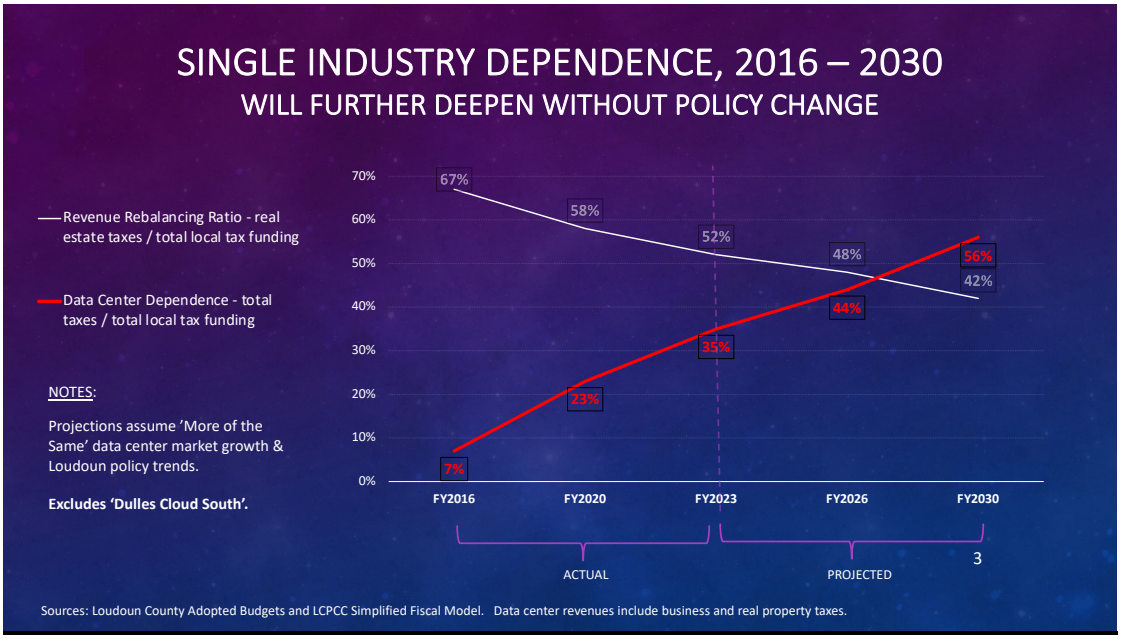
Policy Approach. These two initiatives should be pursued *interactively*. Why? Because the industry's (1) current revenue intensity per acre of land, and (2) the extensive amount of land still available to it - taken together - make the 60% rebalancing aim extremely difficult to meet without coordinated policy change, and expose Loudoun to runaway industry development.

The Data Center Land Study (page 3) makes this clear: rezoning the Transition Neighborhood south of Braddock Road into "Dulles Cloud South" for data centers would - *by this step alone:*

- "enable more than 56 million square feet (ft2) of data center space" – ***an additional two times today's total Loudoun data center space capacity;*** and

- "generate a billion dollars of tax revenue annually" – ***this incremental revenue would push total data center taxes from 35% to over 65% of General Fund revenues by 2030.***

[1] Source – Loudoun Energy Strategies Planning Workshop, September 2021.
[2] This 60% share is hereinafter referred to as the "Revenue Rebalancing Target", or "RRT".



Data center revenue intensity – a land use perspective (pages 3-5 of the main paper). Overall industry tax revenues are well understood: its share of Loudoun's total local taxes jumped *fivefold* from 7% in 2016 to 35% for FY2023 – shifting its role from being a revenue diversifier to a source of revenue risk. But what drives this from a land use perspective?

- *Intense fiscal impacts per acre of land use* – a data center produces about $267,300 per acre on average in real estate and business property taxes in 2022 - versus $16,500 per acre of all other Loudoun business; and

- *Exponential growth of the data center industry tax base* – over 2017-2022, values per square foot of operating space climbed on average 10% per year and operating space expanded at an average 22% per year.

Conclusion: This combination has produced a data center tax revenue surge at a *phenomenal 32% per year – nearly ten times* all other Loudoun business. So, a little data center growth goes a long way fiscally and should be managed *sparingly* to ensure balanced economic growth and responsible fiscal management in the years to come.

Data center land use – the scope for new development (pp 5-6). Data centers are expanding into Dulles West, the Route 50 corridor, the Catoctin TPA and Leesburg JLMA, with parcel sizes growing toward 50 -100 acres each. Total data center land use at February 2022 was about 2,600 acres on 95 parcels, with 152 structures totaling 27.7 million ft2 of operating space capacity.

The amount of additional land available for industry development under current land use policies and Place Type changes now under consideration is substantial:

- *Vacant data center "land banking'* – about 2,050 acres are recorded as holdings of data center firms or affiliated developers;

- *Other vacant commercial land* – up to another estimated 1,000 acres has vacant land over 10 acres each in PDOP, PDGI and PDIP;

- '*Dulles Cloud South*' – 2,270 acres on 51 parcels defined by the Loudoun Data Center Land Study - *nearly equal to Loudoun's current total data center industry land use;* and

- *Repurposing / replacement* – as suitable vacant space becomes more limited, the industry can be expected, as elsewhere, to convert existing flex-industrial, retail and office space.

Conclusions: The current land available to the industry is incompatible with the 60% revenue rebalancing target (RRT) recommendation of Staff, and it exposes the County to 'runaway' data center development that will only increase industry single industry dependence and fiscal risk:

- Industry development of vacant land currently owned or otherwise available to it would - without policy change - increase the number of data centers from 152 to about 286, and enable it to ***more than double its current land use footprint and operating capacity.*** This would continue the 5-year 'open market' growth rate of about 3 million ft2 per year.

- Adding to this the rezoning of the current Transitional Neighborhood Place Type into 'Dulles Cloud South' would ***triple the current data center land use footprint.*** The number of data centers could rise to between about 420 and 490, and raise the current 'open market' operating capacity growth rate from about 3 million square feet per year to between about 6 - 9 million square feet per year.

As the next section suggests, enabling such expansion of land use by data centers is simply unnecessary given their immense tax benefits per acre. Supporting Loudoun's *existing* stock of data centers with a 'grow in place' approach *can generate a significant and sustainable share* of the revenue needed by the County to support its expenditure growth through 2030.

Modeling land use and fiscal options to reach the Revenue Rebalancing Target (RRT). This section explores policy avenues under the two above-mentioned County Initiatives to reduce single industry dependence using a simplified fiscal planning model. The model portrays (1) continuation of recent policies, (2) the impact of various individual policy actions, and (3) the impact of a balanced combination of policy actions. Results are summarized below.

'More of the Same' policies and consequences (p 8-10). Modeling suggests that continuing Loudoun's past 5-year 'open market' data center development trend, adding about 3 million square feet per year of operating capacity - with no changes in County tax and spending policies - would drive up data center revenue dependence from the current 35% to about 56% by 2030. And it would drive the real estate tax revenue share down from today's 51.5% to 42% by 2030.

Conversion of the Transitional Neighborhood Place Type below Braddock Rd. into "Dulles Cloud South" would further raise data center revenue dependence to 65% - 70% by 2030 and drive real estate tax share further down to between 32% - 37%. This step - on top of the 'open market' industry growth - would generate between $6.9 - $9.8 billion in excess of the revenues needed to continue funding the County's ongoing high 7% spending growth rate over 2024-2030.

Conclusion: In the absence of decisive policy change, both the current 'open market' path and the addition of 'Dulles Cloud South put Loudoun at serious risk of further and dramatic single industry dependence, further community resistance and environmental impacts, ongoing damage to economic diversification, and more land use pressure to put data centers in the TPA and RPA.

Data Center Capacity and Land Use over 2024-2030					
	Feb 2022	**Base Case**	**'Open Market'**	**+ DCS - Lo**	**+ DCS - Hi**
Annual capacity growth (millions ft2)		1.0	3.0	6.3	9.0
Total capacity growth (millions ft2)		7.0	21.0	44.1	63.0
Total capacity in 2030 (millions ft2)	27.7	36.0	57.0	80.1	99.0
Total number of data centers	152	179	286	421	490
Total land area occupied (acres)	2,550	2,941	4,696	6,966	6,966
Data center revenue dependence	**35%**	**28%**	**56%**	**65%**	**70%**
Revenue Rebalancing Target (RRT)	**51.5%**	**60%**	**42%**	**37%**	**32%**
Sources: LCPCC Simplified Fiscal Model and Data Center Census Update at Feb. 1, 2022. DCS = Dulles Cloud South					

Individual policy responses (p 11-12). The model examines six single policy adjustments to avert the consequences of 'More of the Same' policies:

1. *Accelerate new residential housing development* - produces net negative marginal real estate tax revenues;

2. *Diversify the Loudoun business economy* - has a marginal medium-term tax impact, mainly as total data center taxes account for four times the rest of Loudoun business;

3. *Change tax rates only* – raises data center dependence using the equalized real estate rate (RPT), and only stabilizes it with progressive cuts in the business property tax (BPPT);

4. *Reduce total expenditure growth* – plays a vital role to reduce the homeowner tax burden and encourage residential acceptance of other changes, but is inadequate to reach the RRT; and

5. *Limit future data center development only* - would still leave Loudoun with a heavy reliance on data center business property tax revenues - and actually *increase* industry exposure given rising taxable value per unit of operating space.

Conclusion: single policy adjustments are found to be either counterproductive, ineffective or inadequate to raise the real estate tax share above the FY2023 level toward the RRT.

A balanced and coordinated policy response. There are a number of specific policy combinations that will achieve the 60% RRT and balance the budget in doing so. Please see pp. 12 -17 for a specific Base Case scenario that *gives priority to finding adjustments with the lowest acceptable impact on the real estate taxes of Loudoun residents*.

The basic approach has these common elements:

1. ***Adopt a 'Grow in Place' land use policy for data center development.*** This would give incentives to build additional stories on existing structures, increase 'densification' of computing equipment per unit of space, reduce residential community impacts and accelerate sustainability. This would enable the industry to continue to share in the County's comparative advantages, deepen in-place growth, and benefit from regional data center development in surrounding counties. For Loudoun, it would also help to:

    a) 'right-size' industry revenues to be more compatible with the RRT;

    b) set guardrails against runaway industry development, like a 'Dulles Cloud South' and

    c) preserve land for strong diversification of Loudoun's economy.

2. ***With a 'grow in place' policy adopted - moderate the Business Property Tax (BPPT) rate progressively over 2024-2030***. More limited data center land use would enable reductions in the BPPT rate, an important step to help meet the RRT, without encouraging more industry land development. It would also signal Loudoun's policy to:

    a) maintain its competitiveness as an industry host that supports its existing data center industry growth via 'densification' and building upward on existing footprints, and

    b) provide incentives to renew equipment and increase productivity of existing space.

3. ***Ease total public expenditure growth.*** Moderating the County's annual spending growth rate from about 7% - which is inordinately high in relation to its 1.8% annual population growth rate and regional standards – to about 5% per year would:

    a) reduce to a minimum the rise in the average homeowner tax bill required in the overall adjustment process to rebalance revenues,

    b) help avoid imprudent spending and shift back to the Virginia State level its rightful funding obligations, such as for local transportation investments; and

    c) *still enable reasonable spending growth* each year to expand County services.

4. ***Continue recent real estate property tax policies*** – continuing the FY2021-2023 trend in the average homeowner tax bill would ensure a balanced budget along with achievement of the 60% RRT. This would also:

    a) increase revenue reliance on existing non-data center business property and residents needed to rebuild revenue stability and diversity, and

    b) signal a maturing of County development that is similarly reflected in tax policies of other DC area jurisdictions.

5. ***Increase protection against short-term revenue volatility.*** Loudoun's risk management strategy needs in the FY2024 budget to supplement the 10% reserve provision in Loudoun's Fiscal Policy – a level set long ago based on real estate not business tax risks. This would:

    a) establish a buffer against volatile and unpredictable fluctuations in data center tax revenues and discourage excessive spending in times of major revenue surpluses, and

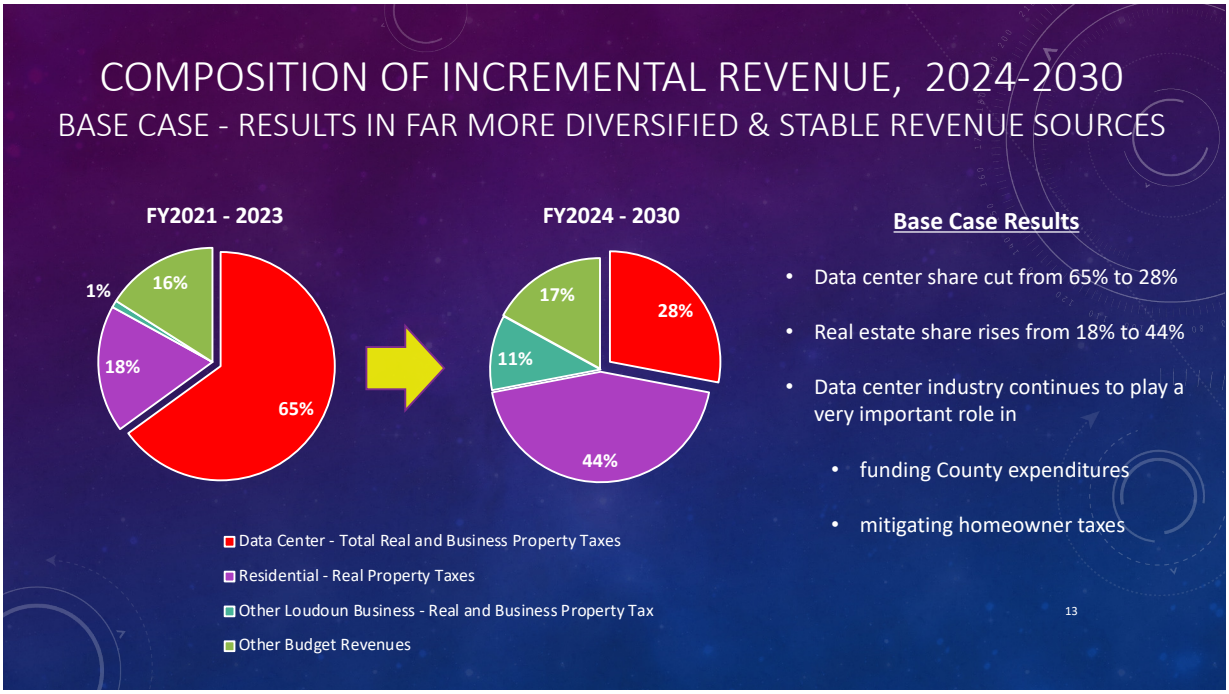
    b) stabilize annual revenues when shortfalls occur, and reinforce Loudoun's credit rating

Conclusions: Unlike individual policy actions, *fostering compromise on a combination of adjustments* - in land use acreage and related community and sustainability standards, tax and spending policies - would not only reduce single industry dependence and related concerns, but:

a) result in far more diversified and stable sources of revenue which are vital to ensure sound and responsible financial management in support of Loudoun's future, and

b) still yield a substantial and stable long-term data center industry participation in funding County services (estimated at about 28% of total incremental revenues) and in moderate homeowner tax bills.

Without such action, the County risks revenues far beyond its budget needs, deeper dependence on the industry, and fiscal instability.



Next Step Recommendations

We are grateful to the Transportation and Land Use Committee (TLUC) of the Board of Supervisors for organizing the Data Center Discussion Series. It has generated a badly needed focus on the role to be played by the industry in Loudoun's future managed growth strategy. We believe that it represents a solid basis upon which the following additional steps need to be taken.

1. **Adopt an integrated Data Center Development Policy Guide.** Debate in TLUC over April -June has focused on all four areas of concern identified in this paper: (1) land use, (2) environmental impact, (3) economic diversification, and (4) fiscal impact. As discussions and this paper reflect, these areas are *not separate, but highly interdependent and require more integrated attention at both policymaking and transactional levels*. We recommend that:

    - TLUC be the coordinating anchor to formulate a Data Center Development Policy Guide comprising the above-mentioned four area for the consideration and approval of the Board. We encourage TLUC in its upcoming July 18 meeting to organize this effort and to schedule additional meetings in the Data Center Discussion Series for this purpose.

2. **Land use – reduce single industry dependence, foremost by reducing approvals of new data centers.** Adjusting where data centers can and cannot go in County Place Types is a necessary but insufficient first step. We recommend that the TLUC Data Center Discussion Series:

    - (a) promote "growth in place" by incentivizing existing data centers to build additional stories on their structures and to increase 'densification' of computing equipment per unit of space; (b) reduce the total vacant land available for data center development, including by changing as possible permissibility for unvested parcels; and (c) expand existing use-specific design standards to reduce data centers' proximity to residential communities, noise from cooling and onsite backup power, and other impacts so as to lower local resistance and ensure a sound community-industry partnership over the long term.

3. **Environmental impact – accelerate data center sustainability.** Sustainability is an important priority in the data center industry. Nevertheless, its concentration and growth in Loudoun demand that the highest priority be given to slowing the rise in the County's extraordinary greenhouse gas emission levels in the DC Metropolitan area. We recommend that the TLUC Data Center Discussion Series:

    - (a) encourage strong self-regulating environmental standards by Loudoun's data center industry,[3] (b) establish standards for offsite renewable energy use to

[3] See, for example, the Climate Neutral Data Centre Pact in Europe - https://www.climateneutraldatacentre.net/

progressively reach 100%; (c) promote data center sustainability performance standards and certifications that provide proof of energy efficiency, water efficiency and clean back-up power; and (d) establish a mechanism for TLUC to track and review regularly progress in these areas.

4. **Economic diversification – say 'no' to Dulles Cloud South' and strengthen steps to develop and evaluate options.** The proposal and consideration of a 'Dulles Cloud South' (DCS) reflects the need to strengthen the approach to economic diversification. Rezoning this large area for data center development is fiscally unnecessary and would foreclose on important options for County economic diversification if the Board decides to change its current TPA Neighborhood Place Type. We recommend that the TLUC Data Center Discussion Series:

    - adopt steps by which, for all data center development proposals coming before it, the Department of Economic Development also presents alternative concepts and comparative analyses of their economic, community, environmental and fiscal impacts for its deliberation to help advance economic diversification in Loudoun. For example, in relation to a 'Dulles Cloud South' initiative, this might mean considering alternative uses to satisfy the large pent-up demand for flex-industrial space, or to enable a 'green' business zone' for a variety of energy intensive industries, or to generate commercial-scale renewable energy.

5. **Budget management – articulate a medium-term fiscal direction to help moderate single industry dependence and secure more diversified and stable revenues.** The County's current annual budget development process is a sound short-term financial management vehicle. However, additional fiscal tools are needed in concert with land use changes to navigate toward the RRT over the medium-term. We recommend that the Board:

    - hold a one-day meeting between July-September 2022 to lay out a fiscal path to help reduce single industry dependence over the next five years. It would articulate the main lines of tax policy (business property and real estate) and aggregate spending policy needed to reach the RRT - we urge Staff to prepare a note on such policy options over the next five years to support the discussion;

    - utilize the results of this meeting as the basis for the Board's formal adoption of the RRT and as input to its Preliminary Budget Guidance to Staff in October 2022;

    - at a transactional level, require that each data center development application coming before TLUC and the Board for review include Staff estimates of its real property and business property tax revenues and its impact on the RR; and.

    - request staff to prepare an analysis of revenue risk probabilities and appropriate additional reserve levels to help enable the Board to adopt a policy to reinforce the current 10% reserve levels and to fund it beginning in the FY2024 budget.