AGENDA ITEM DETAILS

Subject: *Review, Discussion and Consideration of Private Infrastructure - (ACTION)
• Review and Discussion of the Private Infrastructure Market Update and Program Overview
• Amended Private Infrastructure Annual Tactical Plan for Fiscal Year 2021 and Proposed Private Infrastructure Annual Tactical Plan for Fiscal Year 2022 - (ACTION)

RECOMMENDED ACTION:

ERS' Investment staff recommends the following motion to the **Investment Advisory Committee:**

> Move that the Investment Advisory Committee recommend that the Board of Trustees of the Employees Retirement System of Texas approve the ERS Private Infrastructure Program Amended Annual Tactical Plan for Fiscal Year 2021 and the proposed Tactical Plan for Fiscal Year 2022, as presented in Exhibit B.

Contingent upon adoption of the above motion by the Investment Advisory Committee, staff recommends the following motion to the **Board of Trustees:**

Move that the Board of Trustees of the Employees Retirement System of Texas approve the ERS Private Infrastructure Program Amended Annual Tactical Plan for Fiscal Year 2021 and the proposed Tactical Plan for Fiscal Year 2022, as presented in Exhibit B.

Background:

Infrastructure typically refers to large essential public systems or facilities which involve long-term capital and often enjoy high barriers of entry by potential competitors. Infrastructure assets are often highly regulated monopolies or long-term contracted businesses. During past asset allocation deliberations, the Employees Retirement System of Texas (ERS) determined that, over the long term, inclusion of Private Infrastructure investments would enhance ERS' expected overall fund performance. Infrastructure assets are generally expected to provide a combination of stable inflation-protected cash flows and capital appreciation.

At their August 20, 2013 Joint Meeting, the Board of Trustees (the Board" and Investment Advisory Committee (IAC) approved an initial target allocation of 3% for Private Infrastructure. The target allocation was subsequently increased to 4% on May 19, 2015 and to 7% on August 23, 2017. Three legacy assets held in the Special Situations portfolio were assigned to the Infrastructure Portfolio at the time of its inception in 2013. The Private Infrastructure Portfolio includes privately held infrastructure assets and other real assets with similar characteristics. The portfolio's long-term benchmark is CPI+400 basis points (bps).

CBRE Caledon (Caledon) has been ERS' infrastructure consultant since early 2019.

PRIVATE INFRASTRUCTURE TEAM

The Private Infrastructure Team is depicted in the chart below. The Private Infrastructure Program will be seeking approval to add an additional analyst position during FY22.

Pablo de la Sierra Pérez
Director Infrastructure and Natural Resources

- Joined ERS August 2014
- 18+ years infrastructure investment experience
- Background in Direct Investing and Engineering
- MS Ind. Engineering from Universidad de Oviedo

Ryan Wilkinson
Portfolio Manager Real Assets

- Joined ERS February 2017
- 11+ years infrastructure investment experience
- Background in Direct Investing & Consulting
- MS Finance from John Hopkins University

Michael Miller
Senior Associate Real Assets

- Joined ERS August 2019
- 11+ years infrastructure investment experience
- Background in Direct Investing and PE
- MBA from New York University

PRIVATE INFRASTRUCTURE PROGRAM REVIEW

As of March 31, 2021, ERS' Infrastructure Portfolio accounted for 3.8% of the Trust, compared to the long-term target of 7%. This is a decrease from 3.9% reported as of March 31, 2020, caused by the denominator effect as the Trust has seen a significant increase in value driven by the public market investments. The weighted average age of investments in the portfolio (i.e. the time since the date of commitments) is 3.3 years. Portfolio investments are in various stages of the j-curve (meaning that there may be losses in the early years before gains materialize) and the overall portfolio remains in ramp-up mode. The portfolio's contribution to the Trust has been subject to review against policy benchmarks since September 1, 2019. While the asset class continues to mature and develop, the policy infrastructure benchmark remains the most applicable metric.

From inception through March 31, 2021, ERS Infrastructure has closed on 20 private funds and 26 co-investments with commitments totaling $2.38 billion. The Private (Infrastructure Portfolio's net asset value (NAV) is $1.201.6 million, or 3.8% of the Trust's assets. Of the $2.38 billion in commitments, approximately $1.08 billion (45%) remains unfunded and is expected to be called over the next few years. ERS' Private Infrastructure Program investments have generally performed as expected. Since inception, the portfolio has produced a Total Value to Paid-In Capital (TVPI) of 1.14x, Distributed to Paid-in Capital (DPI) of 0.36x, and an Internal Rate of Return (IRR) of 4.93%. Given the young average age of the portfolio, performance metrics should still be interpreted cautiously.

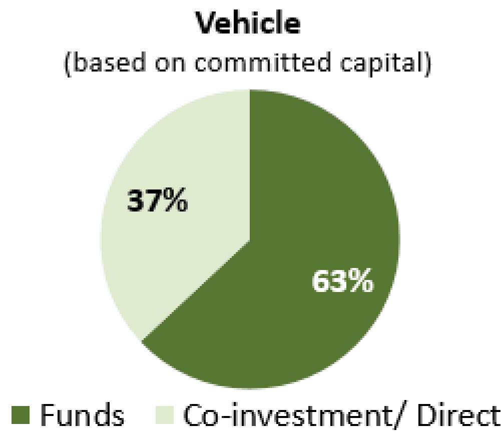
(as of March 31, 2021)	**Portfolio IRR**
1-year	13.56%
3-year	9.12%
5-year	6.78%
Since Inception	4.93%

During FY20 Private Infrastructure committed $414 million (adjusted for foreign currency) in three funds and three co-investments, consistent with the Board-approved FY20 tactical-plan target of $450 million and within the range of $315 - $585 million.

As of March 31, 2021 ERS infrastructure had committed $305 million during FY21, to three funds and four co-investments. Later in this agenda item, staff intend to request approval to increase the tactical plan target for the current fiscal year from $400 million to $475 million.

During Fiscal Year 2022 ERS plans to target commitments of $450 million, within a range of +/- 30% ($315-$585 million), in line with the pacing plan presented in prior fiscal years. However, these targets are guidelines and investments' staff remain opportunistic on deployment of funds into the portfolio, particularly in the current environment.

On a committed-capital basis, the portfolio is appropriately balanced between fund commitments (approximately 63%) and co-investments/direct investments (37%), which are a strong focus of ERS' Infrastructure Program. These co-investments have generated approximately $48.7 million in realized management fee savings through March 31, 2021. Forecasted total savings from existing portfolio investments are estimated at $171 million.

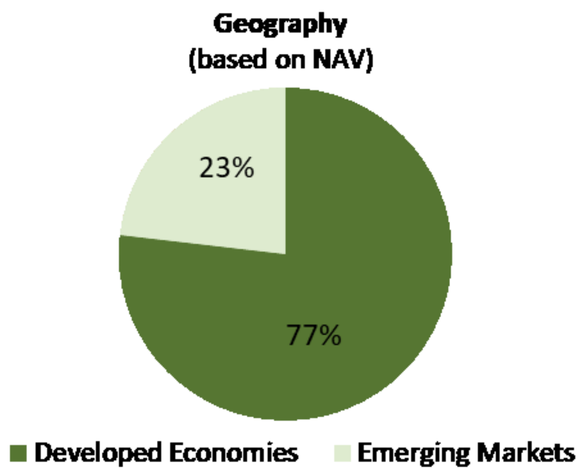


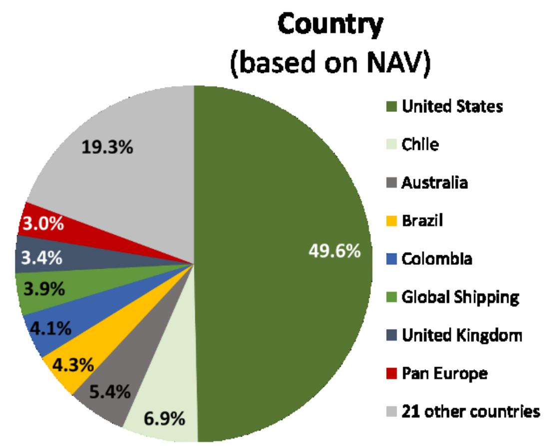
The table below summarizes approved private infrastructure investments from inception through March 31, 2021.

ERS Private Infrastructure Investments
as of March 31, 2021

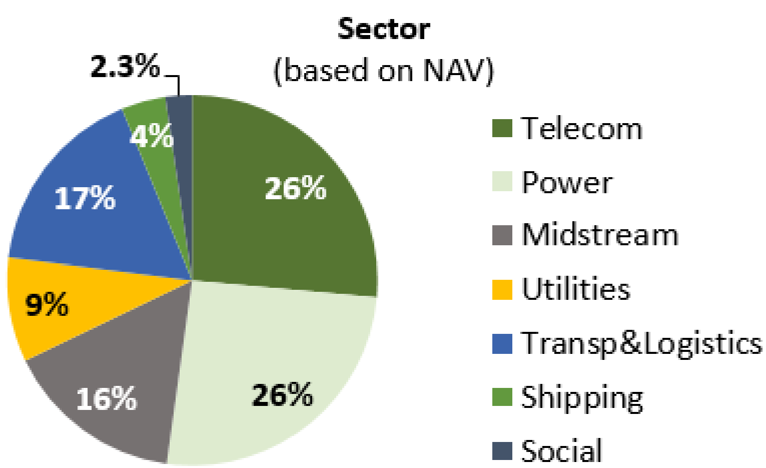
Fund Name	ERS FY	Main Geography/Sector	Commitment MM USD[vi]
Infrastructure Co-Investments 2012	2012	U.S. Power and Energy	$70
Infrastructure Co-Investments 2013	2013	Global Power	$130
Actis Energy 3 L.P.	2013	Emerging Markets / Energy	$75
ISQ Global Infrastructure Fund	2015	Global / Diversified	$75
Infrastructure Co-Investments 2015	2015	U.S. / Power	$30
Infrastructure Co-Investments 2016	2016	North America and Europe / Diversified	$109
Stonepeak Infrastructure Fund II, LP	2016	North America / Diversified	$68
Infrastructure Co-Investments 2017	2017	Global / Diversified	$70
QIC Global Infrastructure Fund	2017	Developed Economies / Diversified	$49
Northern Shipping Fund III LP	2017	Global Shipping	$45
Actis Energy 4 LP	2017	Emerging Markets / Energy	$50
QIC Infrastructure Portfolio	2017	Developed Economies / Diversified	$14
ISQ Global Infrastructure Fund II LP	2017	Global / Diversified	$65
New American Bridges Fund LP	2017	U.S. / Transportation	$50
Stonepeak Infrastructure Fund III LP	2018	North America / Diversified	$100
Ardian Americas Infrastructure Fund IV	2018	Americas / Diversified	$65
Digital Colony Partners	2018	Global / Digital Infrastructure	$100
Actis Long Life Infrastructure Fund[vii]	2018	Emerging Markets / Energy	$100
Infrastructure Co-Investments 2018	2018	U.S. / Energy	$153
Ardian Infrastructure Fund V	2019	Europe / Diversified	$117
Northern Shipping Fund IV	2019	Global Shipping	$50
Infrastructure Co-Investments 2019	2019	U.S. / Energy	$70
KKR Asia Pacific Infrastructure Fund, LP	2020	Asia Pacific / Diversified	$100
Actis Energy 5 L.P.	2020	Emerging Markets / Energy	$75
Stonepeak Infrastructure Fund IV LP	2020	North America / Diversified	$100
Infrastructure Co-Investments 2020	2020	Global / Diversified	$139
Digital Colony Partners II	2021	Global / Digital Infrastructure	$125
Ardian Americas Infrastructure Fund IV	2021	Americas / Diversified	$80
QIC Global Infrastructure Fund	2021	Developed Economies / Diversified	$21
Infrastructure Co-Investments 2021	2021	Developed Economies / Diversified	$79
Total			**$2.38 bn**

ERS' Private Infrastructure Program aims to build a global portfolio with a targeted 50/50 exposure to developed and emerging economies. At this time the portfolio is underweight emerging markets, representing approximately 23% of the portfolio's NAV, and overweight developed economies, representing 77%. The team continues to monitor these metrics and will continue to seek further diversification into emerging markets.

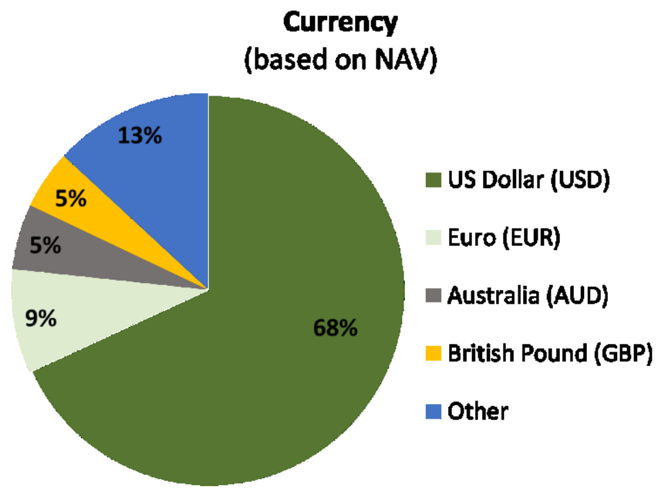




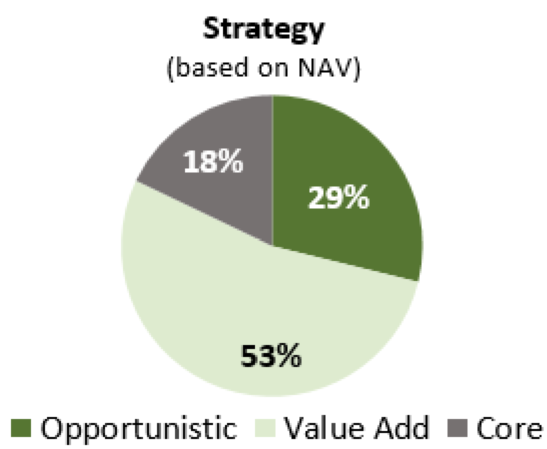
Because of strong capital inflow, the relative size of certain subclasses or subsectors and the definition of infrastructure assets continues to expand. The portfolio is concentrated in energy infrastructure, power, and utilities, representing 51% of the portfolio in total (down from 61% at the end of 2019). Renewable energy and other related energy assets represent more than 20% of the Infrastructure Portfolio. Digital infrastructure has continued to grow in importance and represents 26% of NAV as of March 31, 2021. The midstream component of the portfolio represents 16% of NAV and includes mostly assets with Permian basin exposure. While it is reasonable not to have specific sector targets, nevertheless the team makes every prudent effort to build a diversified portfolio.



The Infrastructure portfolio is exposed to foreign currency movements, and the relative strength or weakness of the US dollar in relation to other currencies during the last year had mixed impacts on the portfolio. The portfolio's currency diversification helped to mitigate this volatility.



The portfolio is underweight core assets. Staff generally finds these types of assets are of lower relative value compared to value-add and opportunistic strategies in the current pricing environment. However, the team will continue to seek appropriate opportunities to add core investments to the portfolio.



ERS expects to reach the portfolio's 7% target allocation sometime in Calendar Year 2023 or 2024. Staff will continue to explore alternative paths to deploy capital efficiently, including ways to pool capital with other similarly-situated investors and to seed new managers. Additionally, the Private Infrastructure team will remain opportunistic in its approach, and given the current competitive and macroeconomic environment, will be flexible regarding the pace of deployment based on the opportunity set that may become accessible to ERS, relative to the actual growth of the Trust.

ERS seeks value creation by taking limited or selective risks (such as construction, emerging markets, etc.) that are efficiently managed in attractively priced investments, and by partnering with managers with experience in successfully managing such risks.

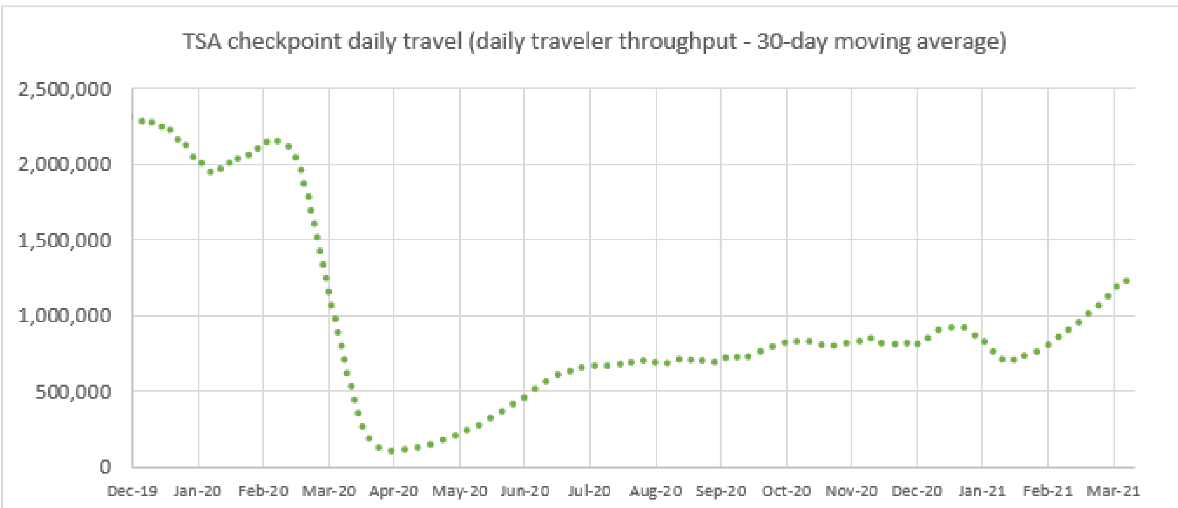
The team continues to see small to mid-market, value-added and opportunistic assets, and greenfield (new construction) opportunities as relatively less pursued than core assets and, therefore, presenting higher relative risk-adjusted value. Riskier assets require investment managers to have more experience and specialized skillsets. The average infrastructure fund and deal continue to be larger than other private asset classes, and there are fewer experienced infrastructure managers. Therefore, the team continues to seek paths for efficient deployment of capital and portfolio diversification and to expand the universe of suitable investment alternatives, including by seeding new managers and pooling capital and resources with other similarly minded investors through LLC or LP vehicles.

PANDEMIC AND OTHER RECENT MARKET EVENTS

The COVID-19 pandemic triggered a sharp and sudden global recession in 2020 as major world economies came to a stop. However, despite the materially negative effects on many infrastructure assets, both the broader sector and ERS' Infrastructure Portfolio has shown resiliency during the period.

Lockdowns and travel restrictions affected fundraising, M&A, and IPO activity globally during 2020, slowing new fund formation, deployment of fund commitments, and exits in all private asset classes. Most of demand-based, GDP-linked infrastructure assets, as well as manufacturing and supply chains were negatively impacted, although many have recovered from recent lows.

The significant disruption of air travel, including the nearly complete stop of international movement of people, has affected airport infrastructure very negatively and airport revenues are still depressed globally and continue to underperform.



Source: U.S. Transport Security Administration

Toll-road traffic and revenues materially decreased in the first few weeks of lockdowns, but many have begun slowly recovering over the last 12 months.

Although M&A activity has been nearly non-existent in the transportation space, in general the long term value of these negatively-impacted transportation subsectors is relatively unchanged – as the market broadly expects a return to pre-pandemic levels in the medium term. The current reduction of revenues have placed some assets under near-term financial pressure, as they are unable to meet their immediate financial obligations and comply with debt covenants. A combination of government support and lender negotiations have mitigated much of those pressures to date.

In the midstream infrastructure space, some basins and assets have at least partially recovered during the last 12 months, aided by a recovery of global oil markets from the lows of the second and third quarters of calendar year. Power consumption and wholesale prices have been less affected compared to other infrastructure subsectors during the period. According to the International Energy Agency, the pandemic resulted in a 2% decline in global electricity demand in 2020. Winter storm Uri, which hit in February 2021, had mixed economic impacts on Texas infrastructure and on ERS' Infrastructure Portfolio. Its impact on the Texas electric grid, gas, and power markets triggered intense debate both locally and nationwide about the role of infrastructure and the structure of U.S. power markets.

Greenfield (new-construction) investments also saw a moderate negative impact due to supply chain disruptions and labor and work-force limitations caused by lockdowns. Despite these negative impacts, most infrastructure assets have shown the resilience and downside protection they are expected to display during economic downturns.

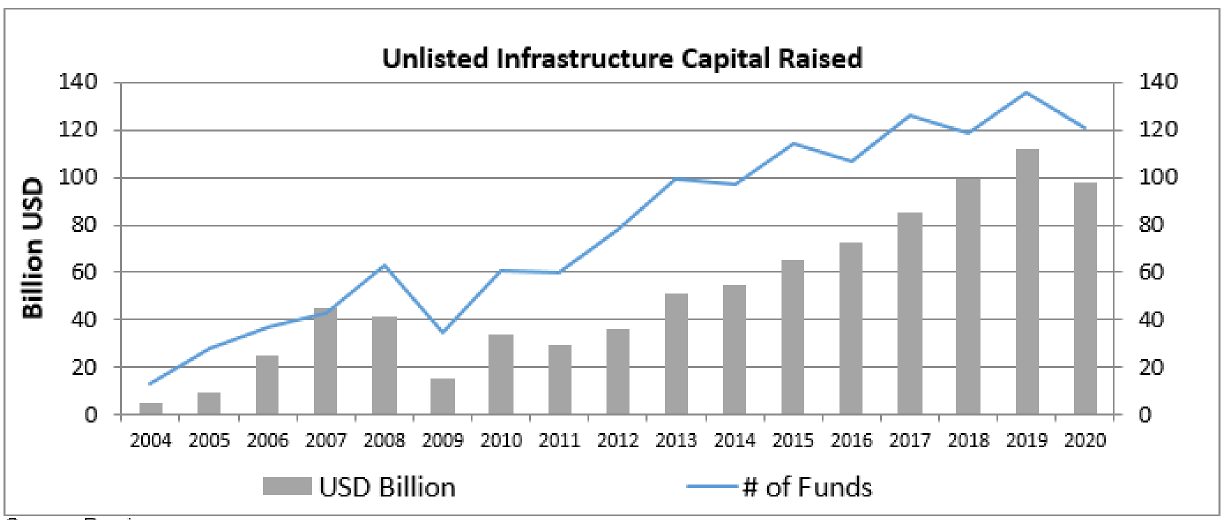
Consistent with the portfolio's objective of pursuing vintage diversification and a stable level of commitments over time, the team proposes to target $450 million in new commitments during FY22, similar to the level indicated in pacing plans presented to the Board and IAC in prior years.

Additionally, the team proposes an adjustment of the FY21 Tactical Plan to increase the target deployment for the period from $400 million ($280-$520 million) to $475 million ($332.5-$617.5 million). Both proposals are discussed in the Tactical Plan section below.

PRIVATE INFRASTRUCTURE MARKET UPDATE:

Private Infrastructure is still a young and developing asset class, and reliable, consistent market information is less available than in other asset classes. However, the Infrastructure sector continues to be highly competitive, especially in core asset deals, assets that present a perceived lower risk profile. This competitive environment tends to push many higher-cost-of-capital investors out of this market segment.

Even though 2020 was a strong infrastructure fund-raising year, the $97.7 billion raised for infrastructure deals was 13% below 2019 levels due to the effects of the pandemic. Data shows the pandemic may have also disrupted a trend in growing fund-size, as the average capital raised per fund appears to have stalled in 2020 at around $810 million per fund, just below the 2019 average size. The team expects the pandemic will continue to slow fundraising at least in the near term, as travel restrictions and constraints on investors' investment activities are expected to continue for much of 2021 and possibly into 2022.



Source: Preqin

Most U.S. and many global institutional investors continue to invest in infrastructure mainly through closed-end funds with legal and commercial frameworks similar to other private asset classes. However, in order to improve asset management costs and governance, many investors seek a more direct approach to infrastructure investments. Not all institutional investors are appropriately set up or have the specialized expertise to prudently take such a direct approach as it requires more sophisticated organizations and a higher level of experience and skill.

Emerging markets are expected to continue to see significant infrastructure investment activity, particularly once they start recovering from the effects of the pandemic. Staff sees Brazil, India, and other countries in the Asia Pacific region as attractive markets with large fundamental needs and increasingly attractive frameworks for investments in infrastructure by foreign investors. However, the volatility of foreign currencies against the US dollar has had mixed effects and the team will continue to be cautious with regards to currency exposure. During 2020, staff saw increased activity in a number of sectors in the Asia Pacific region, including digital infrastructure, although the region remains a highly competitive market.

U.S. oil (and gas) production activity in the most efficient basins suffered during 2020, driven by COVID-19 and other geopolitical tensions at the beginning of the pandemic. This negatively affected the performance of midstream infrastructure for a good part of 2020; however, global oil markets have recovered, supporting a partial recovery of midstream assets in some regions in the U.S., in particular the Permian Basin.

Staff continues to evaluate long-term opportunities in the power sector based on demographic factors, expected power-consumption patterns (including the impact of electric-vehicle adoption, distributed generation, storage, etc.), and the dynamics associated with the normal replacement of older generation plants. Additionally, the increased penetration of renewable energy is creating the need for investments in grid-balancing solutions, including storage. Uncertainties created by the ongoing wholesale power supply model shift (as this was partially evidenced during winter storm Uri in the U.S.) still make the team cautious. While the pandemic may have caused medium term disruptions in consumption trends and the population's habits and needs, the International Energy Agency still predicts that the overall annual power consumption will continue to grow globally (3% global growth is already expected in 2021) and particularly in emerging markets, as consumption growth in developed economies would be mitigated by advances in energy efficiency.

Telecommunication/Digital Infrastructure (i.e. fiber networks, wireless communication infrastructure, data-centers, etc.) has emerged in the last few years as a prominent infrastructure sector, driven by significant data consumption growth mainly as a result of the widespread use of internet-connected devices and video usage, which was accelerated by the pandemic.

In the U.S., bipartisan support may exist for a federal infrastructure plan. The recently announced $2.65 trillion American Jobs Plan, proposed by the current U.S. Administration, will be debated in Congress during the next few months. The proposed plan targets federal investments in a wide range of infrastructure sub-sectors, with an emphasis on climate change and energy transition. It is too early to tell what the final shape of the plan will be and if it will help bring much-needed private capital participation in the development and operation of U.S. infrastructure assets.

In Europe, including in the post-Brexit United Kingdom, the current focus remains on fighting the pandemic and its economic consequences. For some countries this may involve facilitating infrastructure investments as a way to provide economic stimulus, possibly in the form of Public-Private Partnerships with increased opportunities for private investment participation in the next few years.

PRIVATE INFRASTRUCTURE INVESTMENT GUIDELINES:

ERS and Caledon have reviewed the current Private Infrastructure Investment Guidelines and have not identified or recommended any amendments.

TACTICAL PLAN

ERS Investment staff are charged with preparing and presenting an Annual Tactical Plan (Plan) for certain investment operations to the Board for its review and approval. The Plan proposed in this item reviews the current status of the Private Infrastructure Portfolio, recent historical and prospective market conditions, and proposes steps to be taken over the following 12-18 months to continue implementing the

Private Infrastructure Program. These steps include the types and number of partnerships to be sought as well as any other actions or considerations germane to the success of the program. The proposed Private Infrastructure Portfolio Annual Tactical Plan for Fiscal Years 2021 and 2022 was prepared by ERS Private Infrastructure staff with the advice of Caledon, ERS' private infrastructure consultant.

Review and Consideration of Amended Infrastructure Annual Tactical Plan for Fiscal Year 2021 – (Action)

The Private Infrastructure Team recommends amending the Fiscal Year 2021 Private Infrastructure Annual Tactical Plan to increase current target commitments of $400 million with a range of +/- 30% ($280-520 million) to a commitment of $475 million with an upper range of $617.5 million. As of March 31, 2021, ERS Infrastructure had committed $305 million during FY21 (to three funds and four co-investments) and is targeting $175-$275 million in additional commitments, potentially taking aggregate commitments above the maximum previously approved.

When the FY21 Annual Tactical Plan was prepared at the beginning of the pandemic, the Trust's value had reached some of its lowest levels during the crisis. In light of that and seeking to pace the deployment prudently to reach the portfolio's 7% target allocation by 2023 or2024, the team had proposed a target commitment slightly lower than usual. With the market and the Trust's value now in clear recovery, staff proposes to adjust the FY21 annual target commitment accordingly. Other aspects of the approved tactical plan and portfolio construction approach would remain unchanged.

STAFF RECOMMENDATION:

Review and Consideration of Proposed Infrastructure Annual Tactical Plan for Fiscal Year 2022 – (Action)

Consistent with prior years' projections, the Private Infrastructure Team also recommends that the Fiscal Year 2022 Private Infrastructure Annual Tactical Plan target a commitment of $450 million with a range of +/- 30% ($315-585 million). Staff propose targeting approximately three to six new investments for Fiscal Year 2020, across the risk spectrum and geographies, and including co-investments/direct investments.

This recommendation is consistent with maintaining a steady investment pace for the remaining ramp-up years of the program, assuming the Trust grows at 3.50% per year (down from last years' assumption of 3.75%)[i]. Staff will review progress toward the tactical plan periodically and will seek to adapt investment activities to the actual growth of the asset class as restricted by the diversification limits established in the ERS Investment Policy.

While diversification targets are not expected to be met at this stage of the Infrastructure Portfolio construction, Caledon recommends committing more to Core strategies, to meet the lower end of the strategy targets set by the Board. Also, Caledon recommends adding commitments to strategies focusing on the small/mid-market, commitments with exposure to Europe and Australia/New Zealand, and adding at least one manager with a focus on emerging markets. ERS will follow these recommendations to the extent possible as market conditions allow, without compromising investment discipline or taking inappropriate investment risks. Additionally, staff notes that some of the investments currently classified as Opportunistic and Value-Add may be reclassified as Value-Add and Core respectively as they mature or are de-risked over their life. Additionally, Caledon recommends remaining cautious about new commitments to renewable power generation assets, exploring greenfield opportunities (buy-and-build), and investing with first time managers.

ERS staff will continue to seek out capital and resource pooling arrangements with similarly minded investors with the objective of gaining scale and size to increase the System's competitiveness when accessing opportunities and making seed investments. This will contemplate a range of possible investments, including co-investments and direct investments, which will remain a key theme in ERS' approach to portfolio construction. ERS staff will continue to search for proprietary opportunities, and will continue to form relationships with industry players and other investors. ERS staff will approach the infrastructure marketplace opportunistically, rather than focusing on a predetermined subset of sectors or geographies.

STAFF RECOMMENDATION:

Staff recommends amending the current Fiscal Year 2021 Private Infrastructure Annual Tactical Plan to increase current target commitments of $400 million to target commitments of $475 million, with an upper range of $617.5 million, as presented in Exhibit B in accordance with ERS' Investment Policy and Asset Class Guidelines.

Staff recommends the adoption of the Private Infrastructure Program Annual Tactical Plan for Fiscal Year 2022 targeting commitments of $475 million with a range of +/- 30% ($315-585 million), as presented in Exhibit B in accordance with ERS' Investment Policy and Asset Class Guidelines.

** We are accredited by the State Pension Review Board (PRB) as a Minimum Educational Training (MET) sponsor for Texas public retirement systems. This accreditation does not constitute an endorsement by the PRB as to the quality of our MET program. This agenda item may be considered in-house training provided by ERS to board trustees and the system administrator for purposes of fulfilling the MET program requirements. ERS is an accredited sponsor of MET for its system administrator and trustees for continuing education.*

ATTACHMENTS:

1. Exhibit A - Caledon Market Overview
2. Exhibit B - Private Infrastructure Annual Tactical Plan FY2021 and FY2022
3. Exhibit C - Evaluation Criteria.
4. Slides – Private Infrastructure

1. Values in this report are based on December 31, 2020 (or September 30, 2020) valuations, rolled forward to March 31, 2021 for whole-portfolio metrics
2. As indicated at the May 2019 Joint Meeting of Board and IAC, ERS staff, Caledon and NEPC generally considered 5-years as a reasonable maturity threshold to make individual private investments and private portfolios subject to an absolute-return benchmark such as ERS' policy benchmark (CPI+400bps)
3. All performance metrics are based on the most recent available valuations (as of 9/30/2020 or 12/31/2020), adjusted for cash inflows and outflows through 3/31/2021, unless otherwise indicated, and adjusted for foreign currency exchange
4. Some fund commitments are reported here inclusive of commitments to co-investment vehicles
5. TVPI, Total Value Paid in Capital = (NAV + Distributions) / Paid in Capital
DPI, Distributions Paid in Capital = Distribution / Paid in Capital
6. ERS infrastructure guidelines use the MSCI country classification definition for emerging markets, as opposed to the OECD classification most commonly used in the infrastructure sector. The Organization for Economic Co-operation and Development ("OECD") is a 35-member country organization whose stated mission is to promote policies that will improve the economic and social well-being of people around the world. The OECD's precursor was the Organization for European Economic Cooperation (OEEC), which was established in 1948 to run the US-financed Marshall Plan for reconstruction Europe after WWII. The OECD includes many of the world's most advanced countries but also a few less developed like Mexico and Turkey.
7. Additionally, the portfolio's diversification metrics included in this report are approximate and subject to certain assumptions.

[i] Please note this is a Trust Growth assumption, which is affected by the long-term investment return for the Trust as well as contributions and disbursements